DOCUMENT RESUME

ED 032 472 AC 005 115

High School Equivalency. Part I: Theory and Design of the Program.

New York State Education Dept., Albany. Bureau of Secondary Curriculum Development.; State Univ. of New York, Albany.

Pub Date 69

Note-118p.

Available from-Also available, free, the N.Y. State School personnel, from The State Education Dept., Bureau of Continuing Education Curriculum Development, Albany, New York 12224.

EDRS Price MF-$0.50 HC-$6.00

Descriptors-*Adult Education Programs, Bibliographies, *Curriculum Guides, Educational Testing, *Equivalency Tests, Grammar, *High School Curriculum, Literature, Mathematics, Programed Materials, Reading Instruction, Reading Skills, Science Education, Social Studies, Speed Reading

Identifiers-General Educational Development Tests, High School Equivalency, New York State

This handbook is a guide for an adult education program for the student who desires a New York State High School Equivalency Diploma. It covers areas ranging from the scope of the programs in grammar and usage, literature, social studies, mathematics, and sciences, to the background and purpose of the General Educational Development Tests. Special emphasis is placed upon the reading program; techniques required in the development of good reading habits are stressed. Included is a listing of programed and self-directed materials, with publishers and prices. (se)

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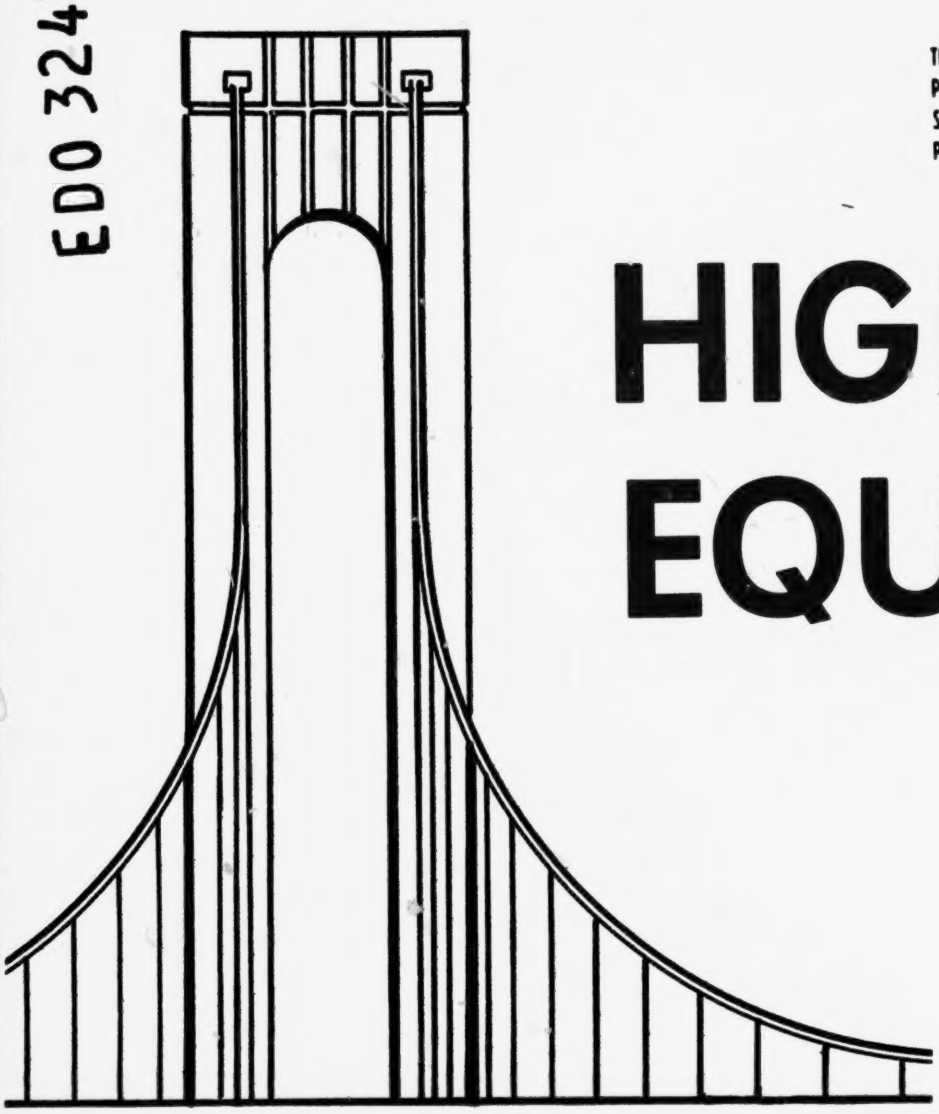

HIGH SCHOOL EQUIVALENCY

Part I: THEORY AND DESIGN OF THE PROGRAM

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HE UNIVERSITY OF THE STATE OF NEW YORK/THE STATE EDUCATION DEPARTMENT
BUREAU OF CONTINUING EDUCATION CURRICULUM DEVELOPMENT/ALBANY

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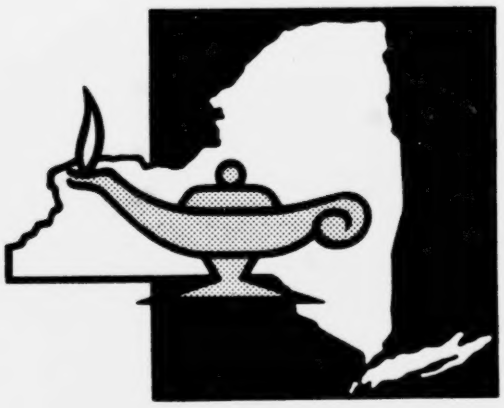
HIGH SCHOOL EQUIVALENCY

Part I:

Theory and Design of the Program



The University of the State of New York
THE STATE EDUCATION DEPARTMENT
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Albany, 1969

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FOREWORD

This publication on the high school equivalency program represents a long and concerted effort on the part of the Department to provide the adults of the State with a course of high quality. The demand for such programs is increasing as more and more adults realize the need and value of a high school equivalency diploma; their future success and well-being depends upon it. Flexibility is essential in designing and implementing such a program. The structure of this document allows for maximum consideration of this important ingredient. Major emphasis of the course is placed upon the desirability and value of conceptual understanding. While certain factual knowledge is essential in developing sound understanding, the principal goal of the program should be that of establishing within the student the ability to formulate concepts based upon factual information.

The Bureau expresses deep appreciation to the members of the advisory committee who gave guidance and direction to the development of the project: Donald Allgrove, Brentwood Public Schools; Agnes Drummond, Director of Adult Education, Port Washington Public Schools; Albert Martins, Ossining Public Schools; Michael McCurry, Queensbury Public Schools. Gratitude is extended to all who assisted in the writing of the first draft of the materials. R. Allan Sholtes, Guilderland Central Public Schools, served as general writer for the handbook. Those who wrote specific portions of the manuscript are: John H. Edwards, Supervisor of Science, Niagara Falls Public Schools; Margaret Farrell, State University of New York at Albany; Mary Hardt, State University of New York at Albany; Milton K. Siler, Jr., Social Studies Department Chairman, Brentwood Public Schools.

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William Jonas, Associate, Bureau of Continuing Education Curriculum, coordinated the project and served as editor in rewriting portions of the content and preparing the final manuscript for printing.

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A MESSAGE TO THE INSTRUCTOR

This handbook provides adult education directors and instructors with a guide for the implementation of an adult education program directed toward the student who desires a New York State High School Equivalency Diploma. The publication covers areas ranging from the scope of the programs in grammar and usage, literature, social studies, mathematics, and science, to the background and purpose of the General Educational Development Tests.

It is the intent of this document to provide adult education directors and instructors with a comprehensive curriculum guide from which they may develop their individual programs. There is much more material included in the subject guide outlines than the instructors may wish to use, and it is expected that they will be selective concerning them. Generally speaking, high school equivalency students are weak in reading. Because of this, and because reading is the basic tool needed by each student to achieve in all academic areas, special emphasis is placed upon the reading program. The techniques required in the development of good reading habits are stressed. In addition, the instructor should realize that considerable attention must be devoted to the mastery of those specific reading skills which are necessary for successful achievement in the content areas.

The program to be developed in each school district will be determined by the requirements of the students, the class time available, and resources at hand. It is strongly suggested that class members be tested early in the program so that their strengths, weaknesses, and needs can be diagnosed, thereby aiding the instructor in determining the scope of the course and in selecting his materials. In all cases the level of the material must parallel the students' abilities.

Included in this handbook are programed and self-directed materials intended for individual use by students in overcoming their personal weaknesses. Instructors are encouraged at all times to give maximum attention to the individual progress of each student.

JOSEPH A. MANGANO, *Chief*
Bureau of General Continuing Education

MONROE C. NEFF, *Director*
Division of Continuing Education

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BACKGROUND OF THE PURPOSE AND THEORY OF THE GENERAL EDUCATIONAL DEVELOPMENT TESTS

Although official school records indicate that many United States citizens have completed less than 12 years of schooling, many have acquired, as a result of formal and informal educational experiences, a degree of educational maturity at or above the level of those graduating from high school. Very often the recognition of an adult's level of educational competency makes it possible for him to qualify for certain positions, promotions, and opportunities for further education. Therefore, it is essential that these adults be given assistance in fulfilling their educational potential. This is the purpose of the General Educational Development Tests.

The GEDT cannot actually measure the total results of a high school education. They do, however, provide a widely accepted and valid means of comparing the educational development of adults with that of graduating high school seniors and of measuring some of the ultimate objectives of a general education.

It is recognized that an individual can make considerable educational progress through a variety of educative experiences, both in school and in other situations. The educational progress of persons not in school is likely to be the result of firsthand observation, direct experience, self-directed reading and study, conversations and informal group discussions, and other experiences with problems, ideas, and people. In contrast to this is the educational development of students in the schools who learn largely by vicarious experiences through the use of textbook and formal pedagogical procedures presented in a sequential arrangement. In the schools there is likely to be a more complete and detailed coverage of specific facts and ideas than is true of the great variety of arrangements of subject matter and problems encountered in out-of-school learning experiences. In consideration of these differences, the emphasis in these tests is placed on intellectual power rather than detailed content; on the demonstration of competence in using major generalizations, concepts, and ideas; and on the ability to comprehend exactly, evaluate critically, and to think clearly in terms of concepts and ideas.

In measuring the outcomes of formal instruction, it may be necessary to place stress on detailed descriptive facts in order to be certain that the student thoroughly grasps the generalizations and concepts based on these facts. It is, however, expected that once the generalizations are firmly established, many of the substantiating details and the organization in which they have been learned will be forgotten. In school examinations, it is regarded as desirable to test for these details because of the recency of their acquisition and because they must be retained temporarily. In examinations intended for adults with varied experiences, the emphasis in the testing should properly be on the major generalizations, ideas, and intellectual skills which are the long-term outcomes of a sound education.

Because the same test booklets are used over a period of several months, it is extremely important that their security be guarded with the utmost care. Copies of the examinations are never made available to directors and/or instructors. In this respect, the GED Tests are similar to tests like the Regents Scholarship Examination and the College Board Examinations.

In order to maintain the integrity of the program, the identity of each applicant must be verified by a school principal or a school official designated by a principal to act for him on high school equivalency matters. In addition, each candidate is fingerprinted at each session of the examination.

At present, there are several forms of the examination in use in this State. Because no applicant may be retested on a form of the examination which he has already taken, test centers will usually have several alternate forms.

Requirements and Content

1. New York State residency is required, with the following exceptions:

   A. A member of the armed services assigned to duty in New York State (or members of his family residing with him)

   B. A Job Corps trainee or a participant in a similar program assigned to a center located in New York State

   In order to qualify under "A" or "B" above, an applicant must submit with his application a Certificate for Nonresidents (Form DET 603C) executed by the appropriate military officer or program director, or his deputy. A transcript of the scores will be sent, upon the person's request, to an educational institution, employment officer or agency. The equivalency diploma will not be issued, however, until such time as the person becomes a resident of New York State and makes a formal request.

2. Every applicant must be 21 years of age or older on the date of the examination, with the following exceptions:

   A. An applicant who is between 18 and 21 is also eligible to take the examination and to receive a diploma if:

      (1) his last attendance as a regularly enrolled student in a full-time school program of instruction was at least 1 year before the date of his examination. His application must be accompanied by a Certificate of Withdrawal (Form DET 603A).

      or

      (2) he is a resident of a narcotic addiction control center, an inmate of a correctional institution, or a patient in a hospital in New York State. The head of the institution must certify that the diploma constitutes an essential element of the rehabilitation program.

B. An applicant who does not meet the eligibility requirements for a diploma as stated above may be admitted to the examination if he is:

(1) a candidate for admission to an institution of higher education for which high school graduation is a normal prerequisite. His application must be accompanied by a letter from the educational institution stating that the applicant is a bona fide candidate for admission to the institution and that his test scores are necessary for admission.

or

(2) a woman who needs her test scores for enlistment in the armed forces. Her application must be accompanied by an official request from the recruiting office for her test scores.

A transcript of the scores of a person admitted to the examination under 2B will be sent to the agency or institution requesting it, but a diploma will not be issued until such time as the person becomes 21 years old or qualified under 2A. The applicant must apply for the diploma when he becomes eligible to receive it. It is not sent unless requested.

The scores reported to candidates are called standard scores. They are not the numbers of correctly answered questions, nor are they the percentages of questions answered correctly. They are mathematically derived scores which enable a candidate's score to be compared with the performance of thousands of high school seniors selected on a sampling basis who took the GEDT just before graduation.

The questions on some parts of some of the forms may appear more difficult than on others. However, the tests are scaled so that the final scores are equivalent for all forms. To compensate for the difference in the degree of difficulty of the questions among the various forms, a lower or higher raw score (number right) may be required on one form of the examination to provide a passing standard score than on others.

The maximum standard scores attainable on GEDT are approximately 75 on each individual test and a total of about 375 on all 5 tests in the battery. On some parts of some forms of the examination as few as 20 percent correct responses are equivalent to a score of 35. In general, if the students answer between 40 and 50 percent of the questions on each of the tests correctly, they will pass any of the current forms of the GEDT.

It should be noted, however, that higher test scores may be required by some institutions of higher learning for admission and by some employers. Therefore it is in the best interests of the students that they attain the highest scores of which they are capable.

The minimum standard scores required in New York State on the GEDT for issuance of a New York State High School Equivalency Diploma are a score of 35 on each of the 5 tests, *and* a total of 225 on all 5 tests in the battery.

A person may also apply for a High School Equivalency Diploma on the basis of GEDT scores obtained at an official out-of-state GED testing center or while in the armed forces. To do this, he must take the following steps:

- Complete the regular application for a high school equivalency diploma. This is the same form used by students applying to take the examination.

- Attach the required fee and, if he is under 21, a completed Certificate of Withdrawal.

- Bring the application, evidence of age, and proof of identity to a principal of a school registered by the Education Department as an elementary or secondary school or, if he is an active member of the armed services, to the education officer of his unit.

- Sign the application in his presence. The principal or education officer will then, after checking the identity of the person, certify the application and forward it to: The University of the State of New York, The State Education Department, Division of Educational Testing, Albany, New York 12224.

The Division of Educational Testing will then obtain an official transcript from the original testing agency. A New York State High School Equivalency Diploma will then be issued if the scores meet *New York State* standards and the candidate meets the other requirements mentioned previously in this chapter.

The 5 GEDT are administered in 10 hours, usually over a two-day testing period. Two hours are permitted for each of the 5 tests. The date of the first day of the testing period is listed in the testing schedule. It should be noted that, although most examinees will have enough time to finish each test, the amount of time allowed is strictly limited.

The 5 tests of the battery cover 5 subject areas usually found in the high school curriculum:

1. The test measuring ability to use correct punctuation, spelling, grammar, and vocabulary

2. The test in social studies measuring ability to read and interpret correctly passages in history, economics, and world events

3. The natural science test measuring ability to interpret passages dealing with the different aspects of scientific principles encountered in everyday life

4. The English literature test measuring ability to interpret passages of prose and poetry

5. The test in general mathematics measuring ability to use the fundamentals of arithmetic, such as are taught in a high school general mathematics class—also including questions dealing with elementary algebra, geometry, and modern mathematics

The greatest weakness characteristic of the majority of the students taking the GEDT battery is in the area of reading. Hence, it is strongly recommended that a great percentage of the total hours in the program be allotted to reading improvement, as indicated by the chart on page 8. The greatest share of the reading instruction should be done in the content areas, thereby teaching and reinforcing these areas simultaneously with the teaching of reading.

Sample Questions

Sample questions may be found at the end of each subject area section. The questions are all of the multiple choice variety, as are the actual questions in the examination itself. They are frequently based upon reading selections provided in the test booklet. They are included in this publication *only* to provide the instructor with a concrete idea of the *form* of the questions on the GEDT. The instructor may devise questions of similar format for his students designed to meet their specific needs.

PREPARATION FOR THE GENERAL EDUCATIONAL DEVELOPMENT TESTS

For many students the GEDT will be their first experience in a formal testing situation. The following are suggestions they may find helpful in preparing for the examination.

- Get adequate sleep prior to the examination.
- Eat in moderation prior to the examination.
- Do not study the night before or the day of the examination.
- Familiarize yourself with the site of the examination and time required to reach it, prior to the day of the examination.
- Have available all equipment needed to take the examination (pens, pencils, and a watch).

These points may seem minor, but it is important that the students be in the proper frame of mind when approaching the examination.

The following are suggestions and hints the students will find helpful when taking GEDT.

- Follow directions. If the directions are not clear to the student, he may seek assistance from the proctor by raising his hand.
- It is recommended that the student go through individual sections of the examination and answer those questions that he can handle easily. He should not spend too much time on difficult questions but return to them when the others in the section are completed.
- Make full use of the time allotted.
- The score on the examination is based on the number of questions answered correctly. No deductions are made for wrong answers. It is well, therefore, to mark an answer for every question.

- Students should know in advance that there are likely to be questions on the examinations for which they will not be prepared.

- Students should be informed that it may take up to 6 weeks to process their application for the diploma.

THE HIGH SCHOOL EQUIVALENCY PROGRAM

Passing the examination is extremely important to the students, but the program should not lose sight of other equally important objectives. In addition to the body of knowledge the student acquires, there should be concomitant learnings in the subject areas. The individual student should be encouraged to continue his education. The program should improve his reading ability so that he will turn to the printed word as a source of information and pleasure. The curriculum should be designed to develop the residual learnings which are expected of a high school graduate three to five years subsequent to his graduation.

The High School Equivalency Student

It would be well for the instructor to keep in mind several characteristics of students in the equivalency program that are perhaps peculiar to them. There may be motives for taking the GEDT other than the personal advancement mentioned previously. Status and personal satisfaction may be the sole motivation for some. Many may wish to enter institutions of higher learning. There may be a wide range in ages, abilities, previous educational experience, and socio-economic backgrounds.

There will be traits that are common to all. Most students will be insecure and will need reassurance. Many will have reading deficiencies, and their study habits are likely to be poor. Some will be fatigued when they come to class. They may become quickly discouraged and drop from the program if they do not find success.

The instructor must analyze the characteristics of the students in his class to guide him in his planning. His plans must take into account the needs of his students individually as well as the class as a whole. His approach to the students, the methods to be used in class, and the pace at which he will work with his class should be based upon this analysis.

The High School Equivalency Instructor

Much of the success of the High School Equivalency Program depends on the careful selection of the instructors by the director of the adult education program. The ideal instructor for high school equivalency courses should be one who has great empathy for adult students, is cognizant of their limitations, and sympathetic to their goals. It has already been stated that these students are highly motivated. The instructor must possess a sincere desire to help these adults succeed. The teacher who has strong beliefs in the value of the program and its goals will achieve much better results than one whose motives are limited.

The specific qualifications necessary for teachers in the program are predicated on the time schedule adopted by the local school district and the number of classes justified by the enrollment. If the equivalency course by necessity is limited to a single instructor, then it would be in the best interests of the program for the director to find one who possesses a broad background in subject matter areas. This enables him to work with students effectively in each area. Ideally, however, a full force of subject matter specialists should be employed. This would include a science teacher, a mathematics teacher, a social studies teacher, and an English teacher with a strong reading background. An English teacher with a reading background is very important in this program because most, and often all, of the students will have reading difficulties. These difficulties may be confined to one content area, or they may be common to all content areas. An instructor with a reading background will be skilled not only in diagnosing the difficulty, but in providing the remedy as well.

The recommended minimum for any equivalency program would be a two-instructor program: an English instructor, strong in basic reading techniques; a mathematics teacher, preferably one with experience in the area of general mathematics. A background in general mathematics is important because this is the type which must be taught to meet the requirements of the GEDT. It may be expected that most students in the High School Equivalency Program were non-Regents students when they were in high school, and therefore do not have the background for coping with material beyond a general level of competence in mathematics.

Suggested Time Schedules

There are many time formats that can be utilized in the High School Equivalency Program. The format chosen must depend upon the resources and special needs of the district. Generally, the amount of preparation necessary depends upon the educational background of the student. It should be remembered that students may take the GEDT whenever they wish.

Below are six time formats that have been used in such programs with some of the advantages and disadvantages of each. Reference should be made to the chart on page 8 for the breakdown of hours.

1. A 240-hour program would meet for 2 hours a night, 4 nights a week, for 30 weeks. This program is highly recommended because it provides time for an intensive course in reading; all the content areas; and ample time for counseling, testing, grouping, and individual instruction. Possibly some potential students may find the extent of the attendance requirements discouraging, while others may find this program attractive because of it comprehensive nature.

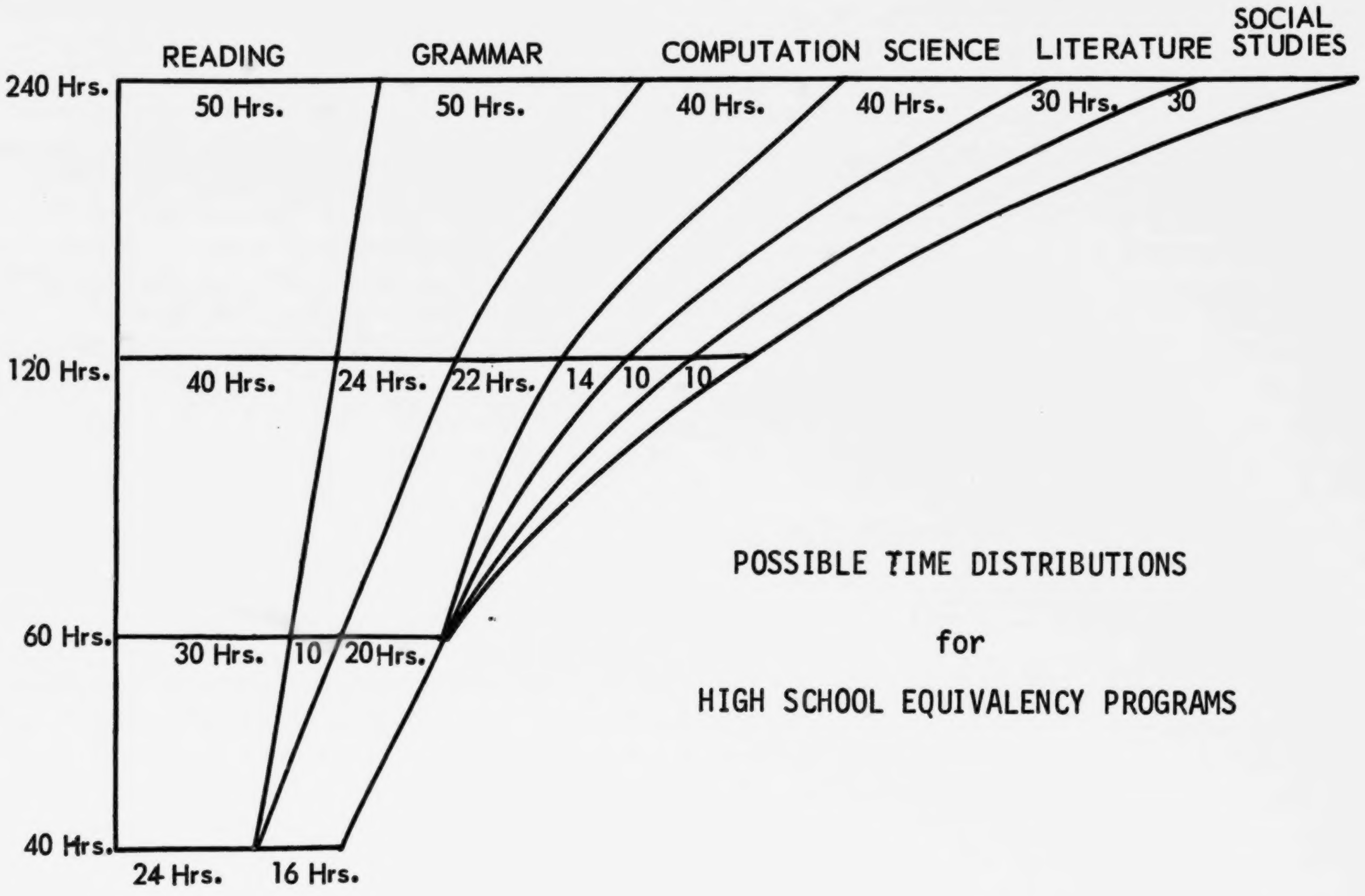
2. (a) A 120-hour program would meet for 2 hours a night, 4 nights a week, for 15 weeks. One advantage of this program is that, in addition to providing adequate time for reading comprehension and grammar, it provides at least minimal time for each of the content areas. Another advantage is that it meets the needs of students with short-term goals.

   (b) A second 120-hour program would meet for 2 hours a night, 2 nights a week, for 30 weeks. This program includes the same educational advantage as (a) above but allows more time for home study and outside reading. It also provides students with some flexibility in their personal time schedules.

(c) A third 120-hour program is a combination of (a) and (b) above. This program would call for class sessions 2 hours per night, 4 nights per week, for 15 weeks, but would alternate English and social studies 1 night with science and mathematics the next. The advantage of this program is that the student has a choice as to which nights he attends, depending on his subject strengths and weaknesses. All 120-hour programs also have the advantage of allowing some time for counseling, testing, grouping, and individualized instruction.

3. A 60-hour program would meet for 2 hours a night, 2 nights per week, for 15 weeks. This program meets the minimal requirements for reading, grammar, and computation, although the time allotted to grammar may be inadequate for many students. Its disadvantages are that it allows no time for social studies, literature, and science. It allows little time for grouping or for individual instruction.

4. A 40-hour program would meet for 2 hours a night, 2 nights per week, for 10 weeks. This program is exceedingly minimal and, at best, is better than nothing. It allows for instruction in only two areas, reading and computation, inadequate time for counseling, testing, individual instruction, and little attention to grouping.



POSSIBLE TIME DISTRIBUTIONS

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HIGH SCHOOL EQUIVALENCY PROGRAMS

Organization of the Program

Regardless of the time format of the program, the basic procedures envisioned for the students would be as follows:

1. Registration and orientation
2. Diagnostic testing in reading, mathematics, English grammar and usage, literature, science, and social studies (using a test instrument like the *Iowa Test of Educational Development)*
3. Counseling (to guide students whose scores indicate that they are likely to fail into more suitable programs and those who are ready for the GEDT to take it at the earliest opportunity)
4. Grouping the students according to their specific needs either into classes or groups within classes
5. Planning specific programs for each class, group, and individual designed to meet his needs

This publication is designed to assist the instructor by providing him with material useful in devising programs suitable for his students consistent with the limitations (time, availability of materials and equipment, etc.) within which he works. *No portion of this publication should be thought of as a curriculum or course outline.*

Guidance Role of the Instructor

The instructor has some definite responsibilities in the area of guidance. He should be responsible for the evaluation of student needs and background. He should be available before and after class for counseling students concerning problems within the academic area. It is his responsibility to counsel privately and informally those students who prove troublesome because of their lack of conformity to class procedures and requirements, specifically those "attention-seekers" who interrupt classroom instruction. Should a troublesome student become a major problem, he should be referred to the guidance counselor or director.

The instructor's guidance responsibilities end when he finds that the individual student's reading level requires the help of a reading specialist, or that a student's personal problems require the help of a guidance counselor, or that the troublesome student needs professional help beyond that which an instructor or guidance counselor can offer.

A standard form, such as the one on page 94 should be used to gain basic information about the student. This form should be completed by all students at the same time, and it should be impressed upon them that it is basic information needed to effectively operate the program and is in no way an evaluation. The completion of this standard form and administration of any tests should be conducted early enough in the program to prevent students from becoming discouraged and dropping out before they can be grouped and helped. However, it is not recommended that any testing be done during the first session. It is more important that desirable instructor-class rapport be developed first.

The student's achievement level should be tested in privacy, and he should be made aware that the test is a tool to be used in determining his needs and developing the proper learning situation for meeting these needs. The information gained from these tests should enable the instructor to group the students within the class. The guidance counselor can be helpful in selecting, administering, and scoring the tests; evaluating the results; and counseling individual students concerning the best course of action for them to pursue in light of the test results and their individual goals. Where a guidance counselor is not available, this responsibility also must devolve upon the instructor.

It is the instructor's responsibility to check on absentees. If a student misses two consecutive classes, it is recommended that he be called, made aware of the work he has missed, and urged to continue regularly. Some students feel that one or two absences destroy all chance of success, and many of these become dropouts from the program. It is recommended that during the time allotted to review and reinforcement in each class, special provision be made for those who have been absent. A duplicated outline of the lesson stressing major points and an attached worksheet might be provided by the teacher. The student could follow this during the review, and questions from the worksheet might be used for illustrative purposes for the whole class. At this time, the instructor should determine if there are any problems being experienced by the absentees in their understanding of the previous material as well as the current lesson.

Methodology

Of special importance to a successful equivalency program is the proper emphasis upon planning by the instructor. Scores from the pretesting program have indicated the achievement levels of the students. Using this information, the instructor has a basis for grouping within the class. His groups should be comprised of students with like abilities and achievements in a given subject area. These groups should not necessarily remain constant since some students will progress more rapidly than others and necessitate a grouping change. Also, a particular student in a given subject area may achieve at a different rate in another subject area and therefore should be grouped accordingly. Flexibility in grouping is important, but it is recommended that there be no more than three groups in a class, lest the preparation for the class become too difficult and the management of the class too cumbersome.

The instructor may find within the class a student or students who do not fit academically into his grouping scheme. Their deficiencies may indicate that they should not take the GEDT at this time, but rather enroll in a basic education class or utilize carefully planned programed or other self-directed materials that will fit their needs. The instructor may find the recommended time emphases included in this publication especially helpful in planning his program and course material. To a degree, the class itself will be the determining factor in the depth and scope of the content covered, but the instructor should establish his own predetermined goals and allotted priorities which the class in general should have reached by the end of the course.

Each class session should begin with a review of the previous lesson. The main points of the previous lesson should be reemphasized and, if it is at all practical, the students should be reminded of the place at which they started, the point at which they have now arrived, and what future lessons hope to accomplish. This technique will help validate the lesson to follow and emphasize goals which have been set for the student.

It is important to class success and regular attendance that the classes be stimulating, informative, and purposeful. A wide variety of techniques and formats is recommended. The instructor and class must make effective use of the available time. The instructor must constantly be aware of the needs that face him: the need to identify those students who require more basic work, the need to diagnose student difficulties as they appear, the need to guide, stimulate, and evaluate students' progress. Teaching devices should never be used as an end unto themselves, but coupled with the development of sound subject matter skills, they will provide the instructor with a variety of techniques and should prove to be useful learning stimuli for the students.

Aids to Instruction

Maps, charts, graphs, newspapers, and periodicals should be available in the room, and slides, filmstrips, movies, overhead projectors, opaque projectors, and film projectors available to the instructor. Record players, recordings, and tape recorders could prove a valuable adjunct to the presentation. Enough rulers, compasses, protractors, and various visual mathematical aids should be made available to the class. Scientific exercises conducted by or demonstrated for the class prove to be both interesting and informative. The resources these adults themselves bring to the class should not be neglected.

The director of continuing education must exert every effort to have the school library open and staffed during the evenings that the equivalency program is being offered. If this proves to be impossible, then a library cart might be used by the instructor to bring to the classroom those books and materials which he feels might be helpful to his program.

There may be community resources which might be utilized in special subject matter areas. The instructor might find it helpful to bring in various members of the community to address the class or present special material. Although the main motivation for the students may be the successful passing of the GEDT, the instructor should take advantage of every opportunity to educate and to spark an interest in further learning.

Evaluation

An especially sensitive area in adult equivalency courses is the problem of evaluation. While periodic testing is a necessary and vital part of any instructional program, the instructor may find it wise to use the word "test" very little, or not at all at the beginning. Adults in this course tend to be highly sensitive to their educational limitations, and a testing situation is often interpreted by them to be a direct threat to their status as individuals, demonstrating their limitations as students.

To avoid this reaction by the students and to promote a more relaxed approach to testing situations, the instructor might refer to tests as practice for the GEDT. Early tests should follow the format of GEDT, but the questions should be fairly easy ones. As the evaluation phase progresses, the test content should more fully reflect the lessons taught and should build in degrees of difficulty. The instructor should provide adequate time to respond to test questions and some extra time for the student to review his answers.

On early tests it is suggested that the student retain his own paper to correct and score so that he may become aware of his deficiencies without exposing them to the class. Later tests should be scored by the instructor and time provided after class to discuss with anyone who so desires the responses given and why mistakes were made. The instructor may observe the test habits of his students. Those who work too slowly or fail to complete tests may benefit from additional practice and advice. The test results themselves might be tallied and a frequency table derived. This table would indicate to the instructor the areas in which questions were missed and those in which greater emphasis and perhaps even reteaching are necessary. These tests should be used as a teaching device, not as an end in themselves. Further, the program will provide students with experience in testing situations. This experience will prove valuable should the individual be faced with a Civil Service examination or similar examination involving job promotion.

Note: The following section and all sections of this publication dealing with the "scope of the program" are *not* intended as curriculums or course outlines. It would be impossible to teach such courses within a practicable time period. They do provide the range within which the instructor should devise programs suitable for *his* students in light of *their* specific problems and the limitations under which they must function. It also provides the instructor with a concept of the range of content which the many forms of the GEDT cover.

THE READING PROGRAM

The instructor should impress students that they count in this reading program. In fact, they are the single most important factor. Their attitude, their essential desire to improve their reading skills and to practice them diligently, will make the difference in their reading progress.

The reading program consists of six major parts: informal diagnostic test, techniques of reading, comprehension skills and techniques, memory skills and techniques, vocabulary development, and reading rate.

INFORMAL DIAGNOSTIC TEST

(Try to complete the work in 30 minutes.)

I. *Major and Minor Topics.* Select the two main categories from the following lists. Write one category next to A and the other next to B. List the appropriate subtopics under each of the two main categories.

English
Botany
Russian
Biology
French
Physics
Sciences
Chinese
Zoology
Spanish
Languages
Chemistry

A. *(Sciences)*
   1. *(Biology)*
   2. *(Chemistry)*
   3. *(Botany)*
   4. *(Zoology)*
   5. *(Physics)*

B. *(Languages)*
   1. *(English)*
   2. *(Spanish)*
   3. *(French)*
   4. *(Russian)*
   5. *(Chinese)*

II. *Main Idea and Detail.* Read the following section about the great Italian actress, Eleanora Duse, and answer questions A and B by checking the items you think are correct.

> Duse's voice was rather high. When she was young she had to train her voice for strength and fullness, but it remained the high Italian kind of voice. In fact, when I heard her in 1923 in the big Century Theatre, I thought her voice was a little too big. I was seated in the back of the orchestra, and I had no difficulty in hearing. Her voice had a strange quality which I have never heard in any other voice. You were never aware of the expenditure of effort. The voice came out easily. It was somehow on a stream of breath. It seemed to float. It simply left her and went on. It traveled, and yet you had the sense that it was the same easy voice wherever you might hear it in the theatre. It was a voice that had no difficulty, perhaps because of her uncanny ability to relax.

Taken from *Strasberg at The Actor's Studio*. Edited by Robert Hethmon. New York. The Viking Press. 1965.

A. The main idea of this paragraph is

_____ 1. the good actress that Duse was
_____ 2. the highness of her voice
__✓__ 3. the qualities of Duse's voice
_____ 4. the difficulty in theatergoers' being able to hear her
_____ 5. Duse's need for training when she was young

B. As a young woman, Duse received training in order to make her voice

_____ 1. somewhat higher
_____ 2. somewhat lower
__✓__ 3. stronger and fuller
_____ 4. more interesting
_____ 5. sound older

III. *Word Structure*. To describe the meaning of each underlined prefix, suffix, or root in the left-hand column below, select the correct word or expression from the right-hand column. Place the letter of the meaning selected on the line preceding the matching prefix, suffix, or root.

(b) 1. unhappy
(e) 2. prediction
(h) 3. misfit
(j) 4. exit
(k) 5. subway
(a) 6. porter
(f) 7. describe
(c) 8. extended
(i) 9. producer
(l) 10. captured

a. carry
b. not
c. stretch
d. across
e. before
f. tell
g. lead
h. wrong
i. a person occupationally connected with
j. out
k. under
l. taken, seized

IV. *Word Pronunciation*. Next to each of the phonetic respellings of the following items write in conventional spelling the word for which it stands.

Examples: gōl goal tung tongue

1. flud *(flood)*
2. flōt *(float)*
3. flāk *(flake)*
4. fōn *(phone)*
5. kən sesh´ən *(concession)*
6. chēf *(chief)*
7. mil´ə ner´i *(millinery)*
8. skōp *(scope)*
9. sut´əl *(subtle)*
10. və nil´ə *(vanilla)*

V. *Syllabication.* Divide the following words into syllables. Mark the primary accent with one stroke and, where necessary, the secondary accent with two strokes.

Examples: concentration con˝cen tra´tion

1. ignition *(ig ni´tion)*
2. umbrella *(um brel´la)*
3. qualification *(qual˝i fi ca´tion)*
4. reproduction *(re˝pro duc´tion)*

Basic Techniques of Reading to Increase Efficiency

Assist students to determine their purpose in reading the material. Then the purpose will dictate both the reading technique and the rate that will be required. Frequently students know their purpose prior to reading; on other occasions reading purpose is decided by the procedure called previewing.

Students need to know a variety of reading techniques; previewing, scanning, skimming, thorough reading, and studying. These techniques are described here in terms of their most effective use, step-by-step procedures, and the kinds of materials to which they most readily apply. This material is contained in the Department handbook *Teaching Adult Reading*. Additional assistance can be obtained by direct reference to this publication.

Prequizzes on Techniques

A quiz might introduce the instruction for each specific skill to be learned. Such quizzes will help the instructor find out what the students already know and indicate what instruction would be appropriate to assist them in using the technique. Satisfactory answers have been placed in parentheses directly following the questions.

Previewing

Prequiz on Previewing

1. What does the word *preview* mean? (*To see something beforehand. A preview of a movie shows some of its scenes in advance of the full presentation of the film.*)

2. Do you think of the word *preview* in connection with television shows? If so, in what way? (*Yes, in the fall the TV networks present new shows. Local TV stations carry previews of these shows prior to their initial presentation to inform the viewing public about them and to arouse interest in them.*)

3. How would you preview a book? (*Note the title, author, and publication date; use such sections of the book as the preface, table of contents, and index. Also read some of the passages to get an idea of the style.*)

4. How would you preview a magazine article? (*Note the title and author, read headings and subheadings, look at the illustrations, and read some of the article to learn about its general content.*)

5. Why would you preview a magazine article? (*To determine whether it would be interesting to read it*)

6. In addition to magazine articles and books, what reading materials would you preview? (*Newspaper articles, reports, and bulletins*)

Previewing is frequently referred to as a surveying, pre-reading, or overview. Its purpose is to gain a general idea of the material. The preview may give the reader all he needs to know about the selection, or it may convince him he needs to read the whole article.

Six Steps in Previewing

The student should complete only those steps which he finds are necessary in order to fulfill his reading purpose.

(1) Note the title and the author.

Reading the title questioningly will help to determine the specific topic being presented. Sometimes the title indicates the main emphasis as well as possible limits of the discussion. The author's name, together with information concerning his special competence to write on the topic, provides a basis on which to judge his expertness in this field and the value of the material.

(2) Read the introductory paragraph.

(3) Read the section heads and subheadings.

Noting the headings and their relationships to each other will guide the reader to an initial understanding of the organization, emphasis, trend of the presentation, and what the author thinks are important aspects of the topic.

(4) Look at pictures, illustrations, charts, tables, and maps and read their captions.

Visual material and accompanying captions often take the place of subheadings in clarifying the author's main ideas.

(5) Note the style of writing.

The reader might try to estimate how much time would be required to read the article. Ordinarily such an estimate would be based on the lengths of paragraphs and the style of writing.

(6) Read the summarizing paragraph.

The gist of the author's presentation may be given in a summary.

Practice Materials

Because of their format, textbooks, encyclopedias, and materials such as railroad timetables, restaurant menus, and schedules of events in museums and public libraries are particularly appropriate for preview practice.

Suggested Method for Teaching Previewing

The procedures suggested for the teaching of this technique could also be adapted to instruction in the other techniques presented in this section.

- Use a prequiz (see page 15) to determine what the students already know about previewing, with questions written on the chalkboard or presented orally.
- Demonstrate how to preview a magazine article which might be contained in a textbook on reading improvement. The selection should have subheadings and illustrations. During the demonstration, students follow the instruction, using their own copies of the selection.
- After the demonstration, answer student's questions about previewing an article.
- Next have students preview another magazine article and complete a comprehension check based on this procedure. This article and accompanying check may also be contained in their reading improvement text.
- Discuss the answers to the check.
- Summarize the lesson.
- Encourage students to preview magazine articles and to bring questions and observations about this practice to class.

Scanning

Prequiz on Scanning

1. How do you find a number in the telephone book? (*Use the last and first names of the person. Check the address if there are several people with the same first and last names as the person you want to telephone. Use the alphabet to do this as well as the guide words at the top of the page.*)
2. How do you locate a word in a dictionary? (*Use guide words, the alphabet, and the spelling of the word. Guide words indicate the first and the last words which are defined on the page.*)
3. The procedures referred to in questions 1 and 2 require scanning. What other reading materials would you scan? (*Timetables, stock*

market quotations and TV listings in newspapers, indexes, and encyclopedias)

4. What is the purpose of scanning? (*To spot information quickly*)

Six Steps in Scanning

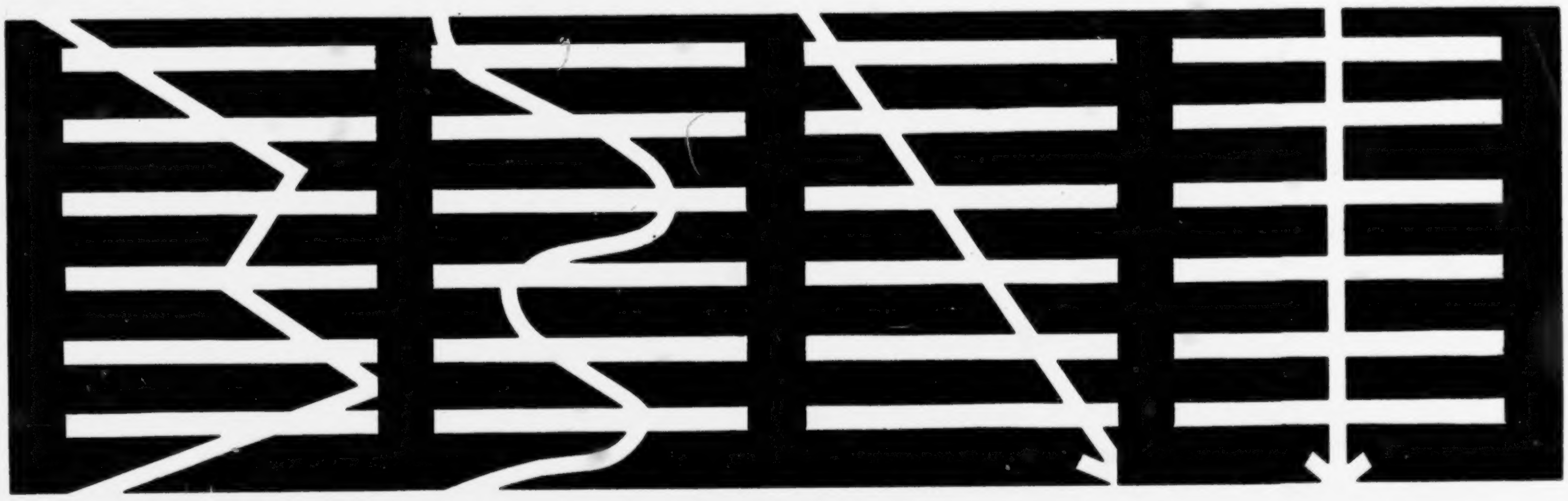
(1) Know exactly what information you are seeking.

(2) Preview the selection to understand its general organization.

(3) Read the material very quickly.

Skim in a zigzag, spiral, diagonal, or vertical manner.

Skimming Patterns



(4) Look for clues to the general location of the information.

If well acquainted with the structure or organization of the material—menus, railroad timetables, museum schedules, and telephone directories—estimate at what place in the material the desired information would be given and look there first. Look to see if there is alphabetizing or some other standard.

(5) Spot guide words and other clues.

Numbers, names, dates, places, titles, and special type faces might lead the reader to the specific information needed.

(6) Read carefully.

Once a clue word is found, pause and read carefully in order to find the required information.

Practice Materials

Magazine and newspaper articles, dictionaries, stock market quotations and TV listings in newspapers, telephone directories, and materials suggested for practicing previewing

Skimming

Prequiz on Skimming

1. How are skimming and scanning alike? (*You read very rapidly for each, using the same process.*)

2. What reading material might you skim? (*Magazine and newspaper articles, reports, and bulletins*)

3. How do you skim? (*Read very quickly the key sentences to get a general impression of the article.*)

Some of the purposes of skimming are to locate the main topics which are presented, understand the general organization, find main ideas, summarize the material, and discern relationships among items in a table.

Four Steps in Skimming for Main Ideas

(1) Preview the material.

Note the title, subheadings, and words in italics or boldface to acquire an overall impression of the material.

(2) Locate topic or key sentences.

Locate quickly the location of the key or topic sentence in the first few paragraphs. The key sentence is often the first one. Move rapidly from one topic sentence to the next.

(3) Read key sentences carefully, observing the author's orderly train of thought.

(4) Skip all details.

Take a comprehension check based solely on understanding the main ideas. Such checks accompany reading selections in reading improvement textbooks.

Practice Materials

Newspaper and magazine articles are useful in practicing skimming for main ideas.

Three Steps in Skimming for a Group of Details

(1) Read at top speed and locate the pertinent phase of the topic, skipping material not related to this phase.

(2) After locating pertinent phase, gather all details and form a unit of thought.

(3) Stop reading upon acquiring the information about this phase of the topic.

Complete a comprehension check based solely on understanding the details. Such checks accompany the reading selections presented in reading improvement textbooks.

Practice Materials

Newspaper and magazine articles and familiar technical articles and books are appropriate materials for reading practice.

Five Steps in Skimming to Summarize an Article

(1) Preview article to gain a general impression of its contents.

(2) Read introductory paragraph thoroughly to grasp the author's starting point.

(3) Read quickly the topic sentence of each paragraph.

(4) Note those sentences that have words printed in italics.

(5) Read the last paragraph thoroughly to grasp the author's summary.

Practice Materials

Magazine and newspaper articles, financial newsletters from banks, textbook and other nonfiction materials may be used to practice this type of skimming.

Thorough Reading: Following Printed Directions

Prequiz on Following Printed Directions

1. At what reading rate should directions be read? (*Somewhat slowly*)
2. How many times might you read the directions on a container of medicine? (*Two or more times depending on the difficulty of the directions*)
3. What procedure do you use when you read printed directions? (*Read to determine the steps enumerated in the directions and read again as you perform each step.*)

Three steps in Following Directions

(1) Read once for an overall understanding.

Read the directions to gain a general understanding of the complete procedure. The reader should attempt to picture each step in a sequential order as well as the expected outcome of each step.

(2) Reread while carrying out directions.

Reread each step while carrying it out exactly as directed. Go on to the next step only after the completion of the previous one. This procedure may require several rereadings to make certain nothing has been omitted or misplaced.

(3) Note exact specifications.

If the directions give specific numbers, such as "two tablets," always reread that item to be sure you understand the correct number.

Practice Materials

Samples of printed directions are to be found on labels on food and medicine containers; on folders accompanying home appliances, concerning their assembly and repair; with the instructions for do-it-yourself home projects and, of course, in recipes.

Thorough Reading: Selections

Prequiz on Reading Thoroughly

1. What are various patterns of organization which authors use? (*Chronological, cause and effect, opinion and reason, and question and answer*)
2. Why must one understand the meanings of key words in reading a selection thoroughly? (*The reader must get the exact meaning of the material.*)
3. What do the words *but, yet,* and *however* indicate? (*Some ideas are being presented which may change or add to previously stated ideas.*)
4. What procedures would assist the reader in recalling material he has read? (*Outlining, making notes, or writing directly on the reading material if it belongs to him*)

Additional Skills

Other skills that will assist adults in reading articles thoroughly are identification of the author's plan, use of outlining or notemaking, understanding the meanings of significant words, noting the use of punctuation, and watching for clue words and phrases.

Identification of the author's plan. Various patterns of organization used by authors include chronological, comparative, enumerative, cause and effect, development of a concept, opinion and reason, and question and answer. An understanding of the plan aids the reader to interpret the material more easily.

Use of outlining or notemaking. To remember more effectively, the reader might outline, make notes, or write directly on the reading material if it belongs to him. These skills are discussed in connection with study techniques below.

Understanding the meanings of essential words. In trying to comprehend material thoroughly, the reader must already know the meanings of the significant words which it contains, be able to determine their meanings through context or through the use of a dictionary, or be able to use a glossary which accompanies the material.

SQ3R Study Technique

A widely used study technique is Francis Robinson's SQ3R, letters which represent survey, question, read, recite, and review. The following is a brief summary of the five steps involved in this technique as drawn from Robinson's book, *Effective Reading,* published by Harper and Brothers.

Step 1. *S-Survey* to ascertain the main topics which are discussed. Glance over quickly the section headings in the chapter to spot the main points or topics which will be developed. Read the final summary paragraph of the chapter.

Step 2. *Q-Question* to whet curiosity, increase comprehension, and to give a purpose for the reading. Turn each section heading into a question.

Step 3. *R-Read* actively to seek the required information. Read the section to find an answer to the question.

Step 4. *R-Recite* to fix the ideas in memory and to self-test knowledge. Looking away from the material, give orally a brief answer in your own words to the question after reading each section. Also give an example with each answer. While reciting, jot down on paper clue phrases in outline form. Repeat steps 2, 3, and 4 for each section heading until the chapter or the lesson is completed.

Step 5. *R-Review* to see the organization of the material as a whole and to remember the main points and the subpoints. After completing the reading, read your brief notes to get an overall view of the main points and their relationship. Cover up the notes and recall the main points. Then uncover each main point and recall the subpoints listed under it.

Review: Four Techniques of Reading, Utilizing Newspapers

Preview

- Read news index for general content of newspaper (if available).
- Preview news article which is accompanied by a photograph or map.

Scan

- Locate time of specific TV or radio program.
- Locate specific section or page for an article, using news index.
- Locate closing price of a specific stock in the financial pages.
- Locate lowest temperature predicted for that day in the weather report.

Skim

- Skim using key words exclusively to gain the meaning of a news article.
- Skim to locate details of an important idea.
- Skim headlines and first paragraphs to acquire the main ideas of news stories.
- Skim newspaper to see which items you want to read more thoroughly.

Read Thoroughly

- Read recipes or do-it-yourself home projects to follow directions.
- Read book, play, or movie reviews.
- Read and evaluate advertisements whose main purpose is to sell products.

Summary Chart of Reading Techniques

PURPOSES	*KINDS OF MATERIALS*	*TECHNIQUES*	*RATES*
To gain a general idea of the contents	Textbook, reference, and other nonfiction materials, and magazine and newspaper articles	Previewing	Rapid
To spot information	Textbook and reference materials	Scanning	Very rapid
To summarize the material	Textbook material and magazine and newspaper articles	Skimming	Rapid
To follow printed directions	Recipes and labels on medicine containers	Thorough reading	Slow

Summary Chart of Reading Techniques (continued from page 23)

PURPOSES	*KINDS OF MATERIALS*	*TECHNIQUES*	*RATES*
To understand a difficult reading selection	Reports, bulletins, magazine articles	Thorough reading	Slow
To study	Textbook and encyclopedic materials, newspaper and magazine articles, editorials, and advertisements	Studying	Slow

Vocabulary Development to Aid Comprehension

A basic need in efficient reading is an adequate vocabulary. An effective way for students to increase their vocabulary is to read widely. Students can widen their vocabulary through their knowledge and use of common roots and affixes, synonyms and antonyms, and contextual clues.

Roots and Affixes

Using the chart, *The Fourteen Words* (see page 25), the instructor might do the following:

Present several words derived from one root in rather simple sentences. These should not be used with affixes. Then have students explain the meanings of the words in context based on the common meaning of the Latin root, *capere*--to take, seize.

- We *captured* butterflies with a large net.
- The soldiers brought back fifty *captives*.
- Some animals are unable to live in *captivity*.
- The small children were *captivated* by the story.
- She read the *caption* under the picture.

Present several words derived from another root. These words might be used with common prefixes. Then have students explain the meanings of the words in context based on root and prefix meanings. Prefixes and their meanings are *de-* about, from; *in-* on; *pre-* before; and *trans-* over, across. The Latin root is *scribere*--to write, tell.

- He *described* the parade.
- The wrist watch was *inscribed* with his name.
- The physician gave his patient a *prescription*.
- The proceedings at the trial were *transcribed* from shorthand notes.

Present several words derived from another Latin root, *tenere*--to hold, have. These words might be used with common suffixes. Then have students explain the meanings of the words in context based on root and suffix meanings. The suffixes and their meanings--*able*--fit for, worthy of; --*ure*--act, process; and--*ant*--one that performs a specified action.

- He had a *tenable* viewpoint.
- The teacher received *tenure*.
- He was a *tenant* in the apartment building.

Present in sentences several words already studied. Have students replace these words in the sentences with their synonyms.

- The small children were *captivated* by the story.
- The soldiers brought back fifty *captives*.
- He *described* the parade.
- The physician gave his patient a *prescription*.

Words	*Synonyms* (words meaning the same)
captivated	fascinated
captives	prisoners
described	told about
prescription	written direction

The Fourteen Words[1]

Keys to the Meanings of over 14,000 Words

DERIVATIONS

	Words	*Prefix*	*Common Meaning*	*Root*	*Common Meaning*
1.	Precept	pre-	before	capere	take, seize
2.	Detain	de-	away, from	tenere	hold, have
3.	Intermittent	inter-	between	mittere	send
4.	Offer	ob-	against	fere	bear, carry
5.	Insist	in-	into	stare	stand
6.	Monograph	mono-	alone, one	graphein	write
7.	Epilogue	epi-	upon	legein	write
8.	Aspect	ad-	to, towards	specere	see
9.	Uncomplicated	un-	not	plicare	fold
		com-	together with		
10.	Nonextended	non-	not	tendere	stretch
		ex-	out of		
11.	Reproduction	re-	back, again	ducere	lead
		pro-	forward		
12.	Indisposed	in-	not	ponere	put, place
		dis-	apart from		
13.	Oversufficient	over-	above	facere	make, do
		sub-	under		
14.	Mistranscribe	mis-	wrong	scribere	write
		trans-	across, beyond		

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[1] James Brown. *Efficient Reading*. Revised ed. Boston. D. C. Heath. 1962. p. 121.

Suffixes

(Numbers correspond to numbers for the root in the list of the fourteen words.)

	Words	*Suffix*	*Common Meaning*
1.	Preceptor (1)[a]	-or	person who, thing which
2.	Detention (2)	-ion	condition or state of
3.	Contentment (2)	-ment	state or condition of
4.	Tenure (2)	-ure	act, process
5.	Tenable (2)	-able	suitable for or capable of
6.	Tenant (2)	-ant	one who, quality of
7.	Superintendent (2)	-ent	one who performs the stated action
8.	Producer (11)	-er	a person occupationally connected with
9.	Disposition (12)	-ion	condition or state

[a] Numbers correspond to numbers for the root in the list of the fourteen words.

Present words in sentences and have students state the antonyms for these words.

- The mystery had a *complicated* plot.
- He was *disposed* to take the new job for more pay.
- The money was *sufficient* to last for two weeks.
- The actor delivered the *epilogue* in a merry tone.

Words	*Antonyms* (words meaning the opposite)
complicated	uncomplicated, simple
disposed	unwilling
sufficient	insufficient, inadequate
epilogue	prologue

Multiple Meanings of Words

Even mature readers are not always aware that most individual words have a number of different meanings. Therefore, the instructor might present in sentences several words to show how the same word has a number of different meanings depending upon how it is used.

Word: *aspect*

- Holmes explained various *aspects* of the plan. (sides, parts, or views of a thing)
- She liked the *aspect* of the countryside. (look, appearance)
- The prisoner noted the solemn *aspect* of the judge. (countenance, expression)
- The northern *aspect* of the house was shaded. (direction anything faces, exposure)

Contextual Clues

Frequently the meanings of rather difficult or unfamiliar words are clarified if the reader can supply and use related words or expressions which complete the thought of the sentence. Context clues help determine the meaning of the unfamiliar word or expression. Such clues include synonyms, antonyms, explanations, literal sense meanings, descriptions, and summaries. After the student has obtained the accurate or approximate meaning of a word in context through using these clues, he might consult the dictionary to make sure he knows the precise meaning of the word in the context. Dictionaries should be available for this purpose. The instructor might discuss with students specific kinds of context clues, supplying examples taken from books they are using currently.

Skills and Techniques to Improve Comprehension

STUDENTS SHOULD KNOW HOW

1. To interpret the title of a magazine article or literary work

The title has particular significance because it presents the topic to be discussed, sometimes indicating the main emphasis and limits of the presentation.

Example

Title of an article in a business magazine: *The Case for Charge Cards*

The words *case for* indicate that the article will stress the many advantages of charge cards to a company and its customers. Probably it will not discuss disadvantages of charge cards for customers.

Activity

Students select the best title for short selections based on the ideas expressed.

Example

In Italy, the giving of gifts occurs not at Christmas time, but 12 days later, at Epiphany. On this day, in parts of Italy, poor children especially envy traffic policemen, for the Three Magi seem wonderfully kind to them. Around the policemen, as they direct cars and pedestrians with lordly gestures, there accumulate dazzling arrays of presents. Usually there are rich-looking hams or salami, great sheaves of spaghetti tied with bright-colored ribbons, bottles of wine, spirits and olive oil, and baskets overflowing with aromatic cheeses, nuts, candies and fruits. All are presents from neighbors and friends — the grateful, the hopeful and the prudent.

Select the best title.

1. Christmas in Italy
2. It's Great To Be a Policeman
3. The Poor Children of Italy
X 4. Italians Give Gifts to Traffic Policemen
5. Rich Food for Italian Policemen

Choice 4 is the only one that correctly limits the group to traffic policemen. The other possibilities are too broad.

2. To determine the main ideas of paragraphs

Procedure

First, select the sentence you feel states the main idea. Then read the other sentences in the paragraph one by one, stopping at the end of each sentence and rereading the sentence you selected as containing the main idea. If your selection was correct, your main-idea sentence will encompass the various statements made in the other sentences.

The topic or key sentence containing the main idea is usually the first sentence of the paragraph, but it can be a sentence at the end or in the middle. Sometimes there is no topic sentence and the reader must formulate the main idea or ideas.

Example

On October 7, 1968, Jack Valenti, President of the Motion Picture Association of America, announced the adoption of the first rating system of American films. After November 1, 1968, he said, films produced in the United States or imported from abroad would be rated under one of the four headings:

G. Suggested for *general* audiences
M. Suggested for *mature* audiences (Children may attend but parental discretion is advised.)
R. *Restricted.* Persons under the age of 16 not admitted unless accompanied by parent or adult guardian.
X. Persons under 16 not admitted under any circumstances

Suggested Main Ideas

For the first time

1. a movie producer uses the expression, *Not for Children* in connection with showing his film
2. there is a rating setup only for American films
X 3. there is a rating system for all films shown in the country
4. actors take a stand on censorship
5. Jack Valenti's name becomes well-known

3. To determine the main ideas of poems and other literary works

Examples

A Word — Emily Dickinson

A word is dead
When it is said
Some say.
I say it just
Begins to live
That day.

Suggested Main Ideas

1. Words are of little importance.
2. The poet disliked talkative people.
3. Women talk more than men.
X 4. Words have lasting value.
5. Language is dead.

Richard Cory — Edwin Arlington Robinson

Whenever Richard Cory went down town
We people on the pavement looked at him:
He was a gentleman from sole to crown,
Clean favored, and imperially slim.
And he was always quietly arrayed,
And he was always human when he talked;
But still he fluttered pulses when he said,
"Good morning," and he glittered when he walked
And he was rich—yes, richer than a king—
And admirably schooled in every grace:
In fine, we thought that he was everything
To make us wish that we were in his place.
So on we worked, and waited for the light,
And went without the meat, and cursed the bread;
And Richard Cory, one calm summer night,
Went home and put a bullet through his head.

Suggested Main Ideas

1. Children and teen-age girls liked Mr. Cory.
2. The townspeople envied Cory.
3. Cory was crude, rough, and cursed too much.
4. Cory shot himself.
X 5. A seemingly successful man ended his life tragically.

4. To complete the thought for each important idea

Students should be alert in determining the important ideas and read to grasp the full thought of each idea.

Example

How Well Is Your Home Insured?

First of all, how much insurance should you have on the dwelling—the building itself? There's a good statistical chance you're underinsured, because an analysis of residential fire losses in one state produced almost unbelievable results: Only one home owner in three carried enough insurance to cover even one-half the replacement value of his house!

That kind of underinsurance can be even more disastrous than may appear on the surface. Are you one of those people who figure, "Well, a house almost never burns to the ground, so $7,500 or $10,000 insurance is plenty?" It isn't. Under most of the policies written today, in order to receive full payment for any partial loss or damage, you must be insured for at least 80 percent of replacement value. And if your home is a few years old, unless you've been increasing your insurance to keep pace with rising construction costs, you may get a jolt when you discover how wide the gap has become.

So if you couldn't answer the question about replacement value, make the first item on your insurance review a note to check with a contractor of your acquaintance, or some qualified person, and get a figure.

Now try another test. Make an outloud inventory of just your personal belongings—the kinds of things that burglars would sweep out in a quick haul, let's say. Several of us were doing this after dinner not long ago, because a bachelor friend had come home to his apartment to find he'd been cleaned out. Everyone who played the inventory game was appalled to find out what it would cost to replace just the major items of clothing that hang in the closets. Try it in your own family, if you want an eye-opener.

Then go on from that beginning to the complete, written inventory that every family should have, listing all furniture and furnishings, appliances and personal belongings.

You should keep one copy of such an inventory in a safe-deposit box, and give another to your insurance man. For one thing, it's utterly impossible to remember all these items after a fire or theft. For another, there's much less room for differences with claims adjusters, after a loss occurs, if your inventory has been a matter of record with the insurer all along. Show the date of purchase and cost wherever you can.

IMPORTANT IDEAS	*COMPLETED THOUGHT*
(a) adequate home insurance	80 percent of replacement value
(b) replacement value of what items	personal belongings + furniture + furnishings + appliances
(c) keep track of replaceable items	by making a record of the items listed directly above

5. To ask questions about the content and find the answers in the reading material

   Example

   Facial saunas give a much deeper cleansing than is possible in any other way--the moist warm mist stimulates the skin to throw off impurities. For just this reason, a sauna is an excellent cosmetic aid for the teenager with oily skin--or the one who has minor blemishes.

   Question: Why are saunas beneficial to teenagers with minor skin blemishes?

   Answer: The sauna cleanses the skin deeply.

6. To draw conclusions

   Example

   When Governor Warren P. Knowles, of Wisconsin, caught a 90-pound sailfish off the Florida coast last summer, he dismissed any thought of having it mounted as a trophy. "I never have fish mounted," said Knowles. "It stops them from growing."

   Governor Knowles meant that

   1. fishermen lie
   2. fishermen never have their catches mounted
   3. fishing in Florida is relaxing
   4. he has enough fishing trophies

   X 5. a trophy would cramp his style in describing the size of his catch

7. To anticipate outcomes

   A reader is alert about what he reads. He thinks ahead and anticipates future actions.

   Example

   This was the opening onslaught in what became one of the most disastrous sieges of air pollution ever to beleaguer an American community. Before it was over, it had engulfed an area of more than fifty square miles. It had disrupted lives, broken up homes and imperiled the health of nearly three hundred men, women and children who lived or worked in and around Garrison. It blighted the economy, poisoned and killed cattle, and made a surrealistic nightmare of the landscape.

   The reader should be able to anticipate that the dire situation may improve through the actions of individuals and groups.

8. To evaluate the material

Adults need to read materials critically.

Example

Editorial: For Electoral Reform

All the basically undemocratic dangers inherent in the Nation's long-out-moded Electoral College got an encouraging raking over in Congress this week. It came during the 4 hours of debate it took for the lawmakers to decide if Richard M. Nixon had been elected by 302 or 301 electoral votes.

In deciding on the latter figure, the senators and congressmen properly—under existing law—upheld the action of a North Carolina elector who refused to cast his ballot for Mr. Nixon although committed to do so by the popular vote. At the same time the legislators strongly assailed the constitutional election system which gives electoral college members the right to so ignore party pledges and vote any way they wish.

What was so encouraging about the debate was its strong indication that Congress at last seems in the mood to do more than just talk about election reform. Senate Republican Leader Everett Dirksen, in fact, predicted that such reform legislation is "virtually inevitable" in Congress this year. And leaders of both Senate and House committees said they soon would open public hearings on a variety of corrective proposals.

The simplest and most sweeping proposal calls for total abolishment of the Electoral College and the election of presidents and vice presidents by direct popular vote. This purely democratic solution is backed by the American Bar Association, and, according to opinion polls, is supported strongly by the public. To suggest any more equitable alternative challenges the imagination.

In any event, Congress should proceed with its scheduled election reform hearings on a priority basis. The dangerous and undemocratic flaws in our Constitution as embodied in the present Electoral College system can no longer be tolerated.

1. Point of the editorial

   The newspaper supports a change in the way presidents and vice presidents are elected: choice by the vote of the people rather than through the Electoral College procedure.

2. Reasons given to support this point

   The Electoral College method

   - Contains hazards that are mainly undemocratic

- Electors can vote as they please, overlooking voter preference.
- Is out of date

Direct popular vote

- Is true to the concept of a democracy
- American Bar Association and the people, as expressed in polls, are for it.

3. Weaknesses in the argument

- It does not give the reasons for the ABA's support.
- It assumes that opinion polls assess accurately the will of the people.
- It does not explain why the Electoral College system has been in effect for such a long time.

Skills and Techniques to Improve Memory

The ability of students to remember what they read is essential for efficient reading. Regular practice of the comprehension skills and techniques presented in the previous section will greatly assist the students' memory. Increased understanding and the ability to remember go hand in hand.

Essentials in memory training

Attitude. Students must want to remember the most important ideas gathered in their reading.

Involvement. Students should engage in writing, speaking, and listening activities concerning their reading.

Environment. Students' setting for reading should be businesslike, not too relaxing. They should use adequate light and avoid glare.

Application. Students should use the information learned immediately and often.

Time: Students should schedule a definite time each day for their reading.

Understanding. The following skills are useful because they require the students to read actively.

1. Students ask familiar questions — who, what, where, when, why, and how — to determine the important facts contained in reading materials. This procedure aids memory. Students will retain this information better by writing these facts and saying them aloud.

Example

At *Good Housekeeping*, we agree that under normal circumstances vitamin and mineral supplements are not needed—it is simple enough to prepare meals that meet the food needs of all healthy family members. We also believe that the supplements can't cure a cold, restore the vigor of youth or perform similar health miracles. However, there are times when some supplements might prove helpful—that is, when someone cannot, or will not, eat properly. They also can give a kind of insurance to anyone who is not certain he is eating properly. But remember: excessive doses are useless and, in the case of some vitamins such as A and D, even harmful.

Example

Writing the Important Facts: Vitamin and Mineral Supplements

Classification 1

WHO?	Those who do not eat properly and those who do not think that they eat properly
WHAT?	Need vitamin and mineral supplements
WHERE?	In people's daily intake
WHEN?	As needed
HOW?	Take internally

Classification 2

WHO?	Those who eat properly
WHAT?	No supplements are needed

2. Students understand comparisons and contrasts. They need to discern similarities and detect differences. Students may increase their retention by writing the likenesses and differences and saying them aloud.

Example

Drug Addicts

During the past few years, the number of drug addicts has greatly increased. The more recent addicts are younger and come from more economically favored circumstances than the addicts of earlier times. In the early part of the 20th century, it was the port towns and the poverty areas which had the reputation of indulging in drugs. Now we see the typical picture painted with younger characters, people in high school and college, from middle and upper income levels who are not needy of food and shelter.

PAST	*PRESENT*
Time: early part of 20th century	late 1960's
Place: port towns	(not restricted)
Economic levels: poverty	middle and upper income levels
Age: older people	high school and college students

The only similarity of the two groups is that both were addicted to drugs.

Increasing General Reading Rate

If students are extremely slow word-by-word readers, they should receive instruction so that they become thought-unit readers. This practice will not only increase the student's general reading rate, but it will also improve his understanding of the material. A thought unit is a block or group of words that has meaning. Writers use thought units. Therefore, the good reader recognizes these thought units and reads them as such.

Example

Using the paragraph from the article *How Well Is Your Home Insured?* (see page 28) have students mark off the thought units in this manner:

First of all/
how much insurance/
should you have/
on the dwelling--/
the building itself?/
There's a good statistical chance/
you're underinsured,/
because an analysis/
of residential fire losses/
in one state/
produced almost unbelievable results:/
Only one home owner/
in three/
carried enough insurance/
to cover/
even one-half/
the replacement value/
of his house!/

Some students may receive assistance in becoming thought-unit readers by looking just *above* the line of print rather than directly at it.

If some students need intensive training to become thought-unit readers, they might be encouraged to participate in the school's continuing education course on efficient reading.

READING IN THE CONTENT AREAS

The instructor may wish to construct reading passages containing vocabulary elements from the various content areas. The vocabulary elements selected should be drawn from those which are essential to the development of the concepts and understandings in each content area. Alternatively, he may use readings drawn from current sources containing these terms. Students would be asked to read each selection. Questions would then be asked about the content, meaning, and implications of the material. Often these questions would be similar in form to the sample questions found elsewhere in this publication. The students would subsequently discuss their answers using material in the selection to support these answers. The questions and selections should be carefully chosen in advance to meet the needs of the students.

Developing Skills for Reading Literature

The skills for reading literature should be developed according to the student's ability, interests, and maturity. The following sections offer suggestions for the development of the skills essential to reading various types of literature. The instructor may wish to refer to the Department publication *Syllabus in English for Secondary Schools* for additional information. Portions of the following materials have been adapted from this publication.

Reading the Short Story

In the literary short story, characters are not all good or all bad as in the juvenile story. Usually they are of mixed characteristics, as in life. There is not merely a succession of incidents each complete in itself; rather, there is usually a well-organized plot. During the opening pages of certain stories where (to the inexperienced reader) nothing seems to happen, the foundation is laid for the one crucial happening of the story. Action may in many cases be largely in the minds and emotions of the characters. This, the student must learn, is none the less action. There is compression. Much is left to the imagination of the reader, who must therefore have an eye for all suggestions dropped by the author. The beginner must learn to watch for these hints.

After one or more stories have been read and discussed in the class, students should be encouraged to read a large number of additional stories from certain designated authors or collections. Several volumes representing a wide variety of types and interests should be included so that pupils may have a wide choice.

Reading Poetry

The importance of selecting, at the beginning, poems simple in form and appealing in content cannot be overemphasized. An enjoyment and appreciation of poetry must be built upon simple beginnings. Although verse is a primitive form of literary expression, most students after a certain age actually prefer prose. This preference may be the result of an unfortunate experience with poetry during earlier years.

Doubtless, in dealing with poetry, the instructor should make much more use of oral class reading than in the case of prose. Not only should the instructor read certain poems to the class, but he should make use of tapes and recordings done by professional actors. Where possible, the instructor should make careful preparation in advance for such reading. Free discussion and expression of opinion are indispensable if the capacity to form individual judgments is to be promoted.

In helping pupils to read and enjoy poetry, the instructor should be prepared to assist students with the following:

Rhythm. Some students lack a sense of rhythm, or fail at first to recognize the rhythm of poetry. Others overstress rhythm. The instructor should assist students to recognize its place in poetry.

Figures of speech. All adults may become interested in figures of speech if treated in a nontechnical, nonpedantic way. Definitions of figures of speech should not be emphasized. Students should be led to see that figurative language is condensed language. They should be led to appreciate the force and vividness of figures of speech.

Word order. In poetry, word order often presents special difficulties. The class should be led to expect a word order different from that found in prose. With this point consciously in mind, students should read and hear poetry until this difficulty is overcome.

Difficulty of the subject. Because poetry often deals with the abstract or the exotic, the choice of materials must receive most careful consideration. Materials chosen should be directly related to student interest.

Capital letters at the beginning of lines. Adults have learned to think of capital letters as beginning new sentences. They should be led, in the case of poetry, to read right over the capital letters. The use of free verse may assist in developing this habit.

Sensory images. Poetry often produces its effects through vivid pictures or other appeals to the physical senses. Students should be helped to cultivate the power of imagination requisite to reproduce these images mentally.

The following points should receive attention as the progress of the work advances:

- The relation of poetry to music
- The differences in the kinds of poetry resulting from different purposes

- The emotional basis of poetry

Wide independent reading with class discussions should follow.

Reading the Novel

Much that has been written concerning the short story, particularly in connection with characterization, plot, and theme, applies also to the novel. However, the reading of a novel presents additional difficulties.

Length and complication. Probably the greatest difficulty is the fact that the novel is longer and may present greater complication of plot as compared with a series of relatively simple incidents common in the usual short story. The reader may become disinterested because the book cannot be broken up into a series of short episodes.

Students should realize that they must not look for many incidents and that the "happenings" in the minds of characters are often the most important in the book. Adults should be led to note that matters which to them may seem unimportant may have a vital part in the outcome of the story; that there is a continuity throughout the book; and that the plot (with the subplots) ties together all incidents and gives them meaning.

Setting. Although the setting of the novel is likely to deal with elements with which the adult is unfamiliar, explanations probably will be absent. The reader usually is introduced to a strange scene with little to assist him to make the transition from the familiar to the unfamiliar. The student should be given assistance in adjusting himself to this abrupt plunge into unfamiliar surroundings.

Characterizations. Characterizations in the novel are much like those in the short story. In addition, instructors should remember that students may not think in terms of abstract moral qualities such as fortitude and self-sacrifice. For this reason, the first novel should not deal with too abstract a theme or involve very much generalization. Informal class discussions should follow the reading of portions of the novel.

Reading the Play

Much that has been said with respect to the study of the short story and the novel applies to the play. In addition, there are special difficulties to be overcome. Plays often continue to be difficult reading for students even after they have read and discussed several plays. Because, in many cases, students have not yet learned to overcome the particular obstacles to the enjoyment of drama in printed form, it will be necessary to review the characteristics of the printed play.

Reading the Essay

Subject and theme. In respect to the essay probably the two greatest difficulties to overcome are these: the subject dealt with may be outside the interests of the adults; both theme and subject matter may be abstract. If readers are to react pleasurably to the study of the essay, the choice of the first essays to be read is of the highest importance. Some students may have little power to think in abstract terms. Therefore essays on familiar specific subjects should be selected at the beginning. The abstract essay is most suitable for the mature reader.

Unfamiliar form. The essay is a literary form that is likely to be unfamiliar. As the student reads it and nothing happens, he may fear he has missed the point. The instructor should indicate what the reader may expect. For first reading, a story-essay is suggested. It is similar enough to the short story to make the transition to the new type essay.

Humor. The importance of humor in the essay should not be overlooked. Here again care should be exercised that the humor is simple and direct enough to be appreciated by the entire class.

In addition to the examples studied in common, each student should read additional essays along the lines of his special interests. Current periodicals, since they present essays (articles) of immediate interest, are of great value in expanding the field of the essay to the adult.

Reading the Biography

The student who has mastered the difficulties of the literary forms already dealt with should have little difficulty with biography except in one respect — background. Sometimes it is necessary to know intimately the history of a country, of a locality, or of a period to read a biography with satisfaction. Care therefore should be exercised that the biography chosen does not require special background knowledge. If such special knowledge is required, it should be provided. Particularly with respect to the biography to be read in common, every effort should be made to choose one having a subject that genuinely interests most of the class members.

Reading Periodicals

Since so much reading is in newspapers and magazines, students should be given training in choosing and reading periodicals. The habit of regularly reading magazines and certain sections of the newspaper should be formed. Instructors should exert effort to arouse an interest in reading about and discussing world affairs, science, government, and social problems. Guided reading in newspapers and magazines will do much in this area. The primary aim should be to make students more discriminating in selecting periodicals and more aware of their strengths and limitations as sources of information.

The following materials in reading in the content areas have been adopted from the Department publication *Reading in Secondary Schools*. The instructor may wish to consult this publication for a more detailed treatment.

Summary of Reading Skills For Literature

The skills list below may be used as a checklist during the course. It sets forth skills that are vitally important to full comprehension of literary works.

The student learns to:

- Appreciate literary materials by analyzing their elements

  Plot
    - recognize the main incident
    - a series of incidents
    - outcome of the story results logically from actions of the characters in these series of incidents

  Characterization
    - understand how character is developed
    - understand that character "lives" in an environment created by the author
    - understand that a character's action results from his own unique composite of traits interacting with variously motivated behavioral aspects of environment
    - understand that a character's believability exists through the unity of individual traits blended with environmental situations

  Theme
    - portrays a view of life which serves to unify a work of literature
    - recognize the theme indicated by title, author's statement, or dialog

  Setting
    - the total environment
    - time as a factor
    - moral, social, and political attitudes as factors

  Point of view
    - first person or third person
    - omniscience or limited omniscience

- Increase his vocabulary

  Distinguish between denotations and connotations of words

- Appreciate poetry

  Theme
    - portrays a view of life

  Rhythm
    - distinguishing between regular and irregular beat
    - capitalization and punctuation in poetry

- Retain and recall theme to compare with future works

Improving Reading and Study Skills in Social Studies

Nature of social studies text materials. The most common pattern found in history textbooks is the presentation of detailed information in historical sequence. Many passages show causes and effects and comparison and contrast. Necessarily, both logical order and chronological order are followed. Maps, charts, tables, and graphs abound as integral parts of the text. Materials on geography present detailed facts with abundant reference to maps and pictures that are often widely separated from the textual references. Specific instruction must be given by social studies instructors in the reading and interpretation of these various patterns of presentation if students are to succeed in comprehending the subject matter.

The reading problem for the student is increased by the many facts, concepts, and complicated relationships inevitable in the study of history, geography, and other social sciences and the need for keeping up with current events. The quantity of reading to be accomplished is another aspect of the reading load of students and instructors alike, and the variety of source materials (including periodicals, reference works, and historical sources) can be bewildering.

Improving comprehension. Basic to improving comprehension of the materials of the social studies is the setting of definite purposes for reading. Instructors may point out the following purposes for reading in a given subject area:

- To answer a question
- To note details
- To obtain a general impression
- To follow instructions
- To substantiate a statement
- To draw conclusions based on inferences
- To follow a sequence of events
- To organize materials from many sources
- To note relationships
- To discriminate between fact and opinion

A chart may be developed and kept on display in the room to remind students of these purposes. Precise questions aid less able students in setting purposes, while more general questions are usually adequate for the more able students.

The rates of reading to be used are determined by the nature of the material and the reader's purpose. These vary widely in social studies from scanning a page to find a date, a name, or other specific fact, to reading slowly and carefully to comprehend and remember a closely reasoned exposition or argument. Instructors should assist students in determining the purpose for the reading and a suitable general rate for the purpose, whether slow, average, rapid, or skimming.

Critical reading. The application of critical reading skills is particularly necessary in social studies. Adults should be encouraged to challenge the author, to raise questions, and to compare one author's treatment with that of another. In judging the completeness and validity of information, the date of publication may be important. Students can be taught to find recent information to update that which appears in older sources.

One aspect of critical reading allied with social studies is the ability to detect propaganda. Actually, propaganda analysis uses a complex of skills and attitudes, including awareness of the connotation of words, ability to distinguish fact from opinion, an unwillingness to accept unsupported statements as proven facts, an alertness to possible hidden motives, consideration of the background of the writer or organization publishing the material, and an unemotional, balanced judgment. Practice in propaganda analysis is one way of fostering critical reading skills. There are a number of techniques that can be used.

- The class reads a newspaper report of a political speech, analyzes the reasoning of the speaker, and notes any obvious emotional expressions used.
- The class reads a newspaper editorial on the subject of a public issue, analyzes the reasoning, and discusses the topic.
- Each student reads copies of two different news magazines and tries to detect differences between them in treatment of the news.
- The class compares the front pages of two or more different newspapers on the same day, noting differences in the kind of news event given prominence and differences in headlines used. They then discuss possible editorial policies.
- The class reads copies of a publicity leaflet issued by any organized group and analyzes it to determine: the stated purpose, possible unstated purposes, worthiness of the purpose, quality of the reasoning, appeals to emotion and validity of appeal, and public image of the organization issuing the publicity.

Reading maps, charts, graphs, and tables. It should not be assumed that students will automatically refer to graphic materials or tables in the textbooks or be able to extract information from them. In fact, there is a tendency for some adults to ignore such materials or to be unable to get meaning from them or even to relate them to the text. Through direct instruction and questioning, instructors should enhance the skills of reading such material and emphasize their importance.

Specific practice exercises in map reading should include reading the title, the key, the distance scale, and the longitude and latitude. Instruction should include the various types of maps and globes: physical, political, historical, and pictorial. Additional exercises should include practice in measurement of distances according to the scale and interpretation of colors or line patterns in accordance with the key. Interpretation practices can be provided by asking students such questions as:

- What natural features of the environment would you expect to find if you visited this area?
- Would you expect this region to offer favorable opportunities for growing wheat? Why or why not?
- If you wanted to go from _____ to _____, what means of transportation would you expect to take? Why?

Similar techniques may be used in developing ability to interpret pictograms, line graphs, circle graphs, and bar graphs. It is important that the reader first note carefully the title of the graph, the key, and any explanatory notes.

Vocabulary development. In social studies, the number of unfamiliar words and expressions used by writers can make comprehension a formidable task for the adult reader. Instructors should put great stress on word study, including the spelling and pronunciation of new words as well as their meanings. Instructors should use techniques leading to independence in word attack skills and the habit of using the dictionary for ascertaining the exact meanings of words.

The great number of new words and phrases encountered by the reader in social studies is impressive when one considers various possible categories:

- Words or phrases expressing concepts like *mercantilism* (and many other *-ism* words), *separation of powers, cultural lag*
- Words in common use that have particular connotations in the context of social studies: *cabinet, bill, culture*
- Words or phrases implying a whole complex of associations: *Victorian, industrial revolution, states' rights*
- Foreign words or expressions: *corvée, kibbutz, bourgeoisie, Pax Romana, apartheid*
- Metaphoric expressions: *political platform, closed shop, man-on-horseback, white man's burden, New Deal, rotten borough*
- Abbreviations: *ca., UN, TVA, GNP, SEATO, UNESCO*

To these can be added the abundance of words designating periods of history, movements, names of persons, places with historical connotations, regions, countries, geographical features, and political parties.

A number of general or nontechnical words in social studies textbooks are difficult as the following samples suggest: *enterprise, initiate, envisage, toleration, confiscate, notable, turbulent, barbarism, collective.*

Summary of Reading Skills For Social Studies

The skills list that follows may be used as a checklist during the course. It sets forth reading skills that are particularly important to full comprehension of social studies materials.

The student learns to:

- Comprehend printed materials

  Recognize the main idea
    -note details
    -select relevant facts

  See relationships
    -cause and effect
    -time, place, and distance
    -sequential
    -part-whole
    -quantitative
    -analogous

  Read critically
    -draw conclusions
    -recognize inferences

  Differentiate between fact and opinion
    -recognize propaganda
    -substantiate facts

  Adjust reading rate to purpose

- Increase his vocabulary

  Recognize and understand technical terms

  Select exact meanings to fit the context

  Use the dictionary, textbook aids, and reference materials

- Understand graphic materials

  Read and interpret
    -pictures
    -maps
    -graphs and tables
    -cartoons

- Follow directions

- Retain and recall

Improving Reading and Study Skills in Science

Nature of the science text materials

Science articles and books generally contain a great deal of extremely concise material. Statements of laws, definitions, characteristics of various situations, and formulas must be read and understood. Descriptive passages and directions for experiments, life cycles of plants, and processes involving inanimate forms are presented. Students must frequently make generalizations and inferences on the basis of this information.

Improving comprehension. Many demands are made upon the reader. Memorization of facts does not necessarily mean understanding the facts. While the student reads his textbook he must constantly question himself: What is the fact? Why is it so? Are there limits to its application? What are the limits? He compares materials and searches for likenesses and differences that exist in the general framework of new material.

In science classes, the instructor should familiarize adult students with the types of passages characteristic of science articles and from time to time give specific assistance in reading each of these types:

- Passages presenting factual details leading to a general conclusion or concept

  The reader is required to note the facts, remember them while completing the passage, visualize the relationships, and grasp the conclusion.

- Passages presenting details of processes

  These involve following time order, amongst other relationships. The reader must attend to the proper sequence of steps in the process. Diagrams and formulas often accompany the explanations and must be carefully examined as the text is read.

- Passages involving classification

  The reader is asked to note similarities and differences, often minute. Pictures are frequently supplied in the text, and the reader should observe these closely to note details.

- Passages giving directions for pupil performance

  Directions must be read first from beginning to end, reread to comprehend and visualize each step, and read again as each step is carried out. A final reading is necessary to check the accuracy of the student's actual operation and to verify the results.

- Passages presenting problems for solution

  The reader must determine what is to be found, what facts are known, what other facts are needed, what steps are to be followed in solving the problem, and how the result is to be verified. (Variation: Some passages present a problem, followed by an explanation of how the problem was solved by scientists.)

- Graphs, charts, tables, diagrams, and pictures

  The reader must be attentive to all parts of such graphic presentation, including captions, titles, labels, and keys.

Especially in the first science sessions, instructors can profitably provide specific practice for efficient reading of each of the types listed above. They may wish to use the SQ3R technique described on page 22 in this publication.

All readers, from the most capable to the least capable, relate the content of their reading to past personal experience, through reading or other study activities. Therefore, prior experience of a science topic serves to increase comprehension of a textbook treatment of the topic. Furthermore, on occasions when the instructor wishes to preserve a sense of discovery or at times give the students opportunity for inductive reasoning, the reading assignment will be done following experiences such as demonstrations, field trips, discussions, and the viewing of audiovisual materials. All adults, especially the less able readers, will better understand the text matter if they have been prepared through development of their experiential backgrounds relevant to the matter being studied.

Developing vocabulary. The vocabulary to be learned is to be considered under two categories—the technical vocabulary and the nontechnical. Technical vocabulary is part and parcel of the subject matter, represented by such terms as *osmosis, photosynthesis, neutron, electrolysis*. Nontechnical vocabulary consists of words used in various other subject areas and in general reading, as well as in science, such as *pressure, maintain, structure, circulate, permeate*. The nontechnical vocabulary is more difficult in some articles than in others. Instructors should be alert for possible difficulties with certain nontechnical words.

The instructor might select a technique, such as one of the following, for dealing with problems of vocabulary and concepts in the science class.

- When introducing a new unit of work, he could construct a pretest of terms to be used in the unit. Later, when the terms are encountered in the text, he will pay particular attention to the clarification of the terms that students missed on the pretest.

- He may choose to present new or unfamiliar terms on the chalkboard or on a chart for discussion before the material is read. The students should locate these words in the article so that they can utilize contextual clues (as well as diagrams, the glossary, or a dictionary) to arrive at the meaning of the term.

- He may present a film or filmstrip depicting a concept that is difficult to verbalize. Students view the film with a definite purpose, directed by questions that are presented in advance. During a subsequent discussion, the student is led to a thorough understanding of the concept that was presented and the terms used in verbalizing it.

- He may require students to keep notebooks, give oral reports, do exercises, or prepare oral quizzes. Such activities provide for repetition of terms and help assure some degree of retention of new vocabulary. Written work provides the student with the opportunity to attend to the spelling of a term; oral work, to the pronunciation of the term.

There is a certain category of words or written symbols that should receive special attention—those words or symbols which have meanings in mathematics or in other subjects which are different from the meanings attached to them in science. For instance, such words as *inversion, base, solution,* and *radical,* such symbols as the plus sign (positive number or symbol for addition in mathematics and reacts with in chemistry), or the degree sign (applied to measurement of an angle or to temperature) merit this attention.

Words of general use that have specificity in science can also cause confusion when initially encountered; for example, *culture, force, property, power, retort, gravity.* Much technical vocabulary in science is learned as a direct result of laboratory experiences, field trips, instructor demonstrations, or audiovisual presentations. That is, a student will learn such a word as *inertia* through demonstrations or laboratory experiences. The study of words should include spelling and pronunciation.

Study of roots and affixes. Because many words in science derive from combinations of Greek and Latin elements, there is value in giving attention to roots, prefixes, suffixes, and combining forms which are common to many science words. The following suffixes used in other areas are widely used in science:

-aceous	pertaining to, resembling *(herbaceous, crustaceous)*
-cide	denoting killing *(insecticide)*
-logy	science of *(zoology)*
-meter	unit of measure *(centimeter)*; instrument for measurement *(thermometer)*
-scope	denoting viewing *(microscope)* or observing *(gyroscope, stethoscope)*

The following endings deserve special attention because of their specific uses in science:

-ase	denoting a ferment; used in forming the names of enzymes *(amylase)*

-ate	denoting a salt or ester formed from those acids whose names end in *-ic (nitrate)*, except a few acids whose names begin with *hydro- (hydrocyanide)*
-emia	denoting a condition of the blood *(anemia)*
-gen	denoting a substance that produces or a thing produced *(oxygen)*
-ide	denoting the name of a compound *(oxide)*
-in(ine)	denoting a substance of definite composition not known or manufactured before the advent of modern science *(vitamin)*. Note: Chemical elements ending in *-in* or *-ine* usually are nonmetals *(chlorine)*, as distinct from elements ending in *-um* or *-ium (aluminum)*.
-itis	inflammation of *(laryngitis)*
-oid	resembling or like *(spheroid)*
-ose	denoting a carbohydrate *(cellulose)* or alteration of a protein *(proteose)*
-um(ium)	denoting an elementary metal *(aluminum, sodium)*

Metals known in ancient times are exceptions as to their common names. They also have Latin names used in abbreviated form in chemical formula— gold *(aurum)*, iron *(ferrum)*, silver *(argentum)*, tin *(stannum)*, copper *(cuprum)*, lead *(plumbum)*.

The following are some of the beginning forms or prefixes especially used in science:

di-	two, twice; in chemistry denoting two atoms, radicals, groups, or equivalents *(diacetate)*
hemo-	blood *(hemoglobin)*
macro-	large *(macrophage, macroscopic)*
micro-	small, minute *(microorganism)*; in various terms in electricity and mechanics it denotes one millionth of a part of a specified unit *(microampere)*
mono-	one, single *(monosaccharides)*
neur-	pertaining to nerves *(neurology)*
thermo-	heat *(thermonuclear, thermometer)*

Summary of Reading Skills For Science

The skills list that follows sets forth skills that are particularly important to full comprehension of scientific materials.

The student learns to:

- Comprehend factual materials

  Recognize the main idea
    -note details
    -select relevant facts
    -define problem

  Organize and classify facts

  Note sequence

  Read critically
    -draw inferences
    -draw conclusions
    -separate fact from opinion

  Recognize relationships
    -cause and effect
    -sequence

  Adjust reading rate to purpose

- Increase his vocabulary

  Recognize and understand technical terms
    -note exact meanings
    -suit meaning to context

  Use dictionary and glossary as an aid to understanding

- Understand pictorial materials

  Graphs

  Diagrams

  Cartoons and other representations of scientific facts

- Follow directions

- Retain and recall

Improving Reading and Study Skills in Mathematics

Nature of mathematics text materials

The successful reading of any kind of material depends upon the ability of the reader to relate the reading to his previous experience. This concept is particularly true in mathematics because of its sequential organization in the processes of developing concepts.

As all mathematics instructors know, mathematics employs a symbolic system of its own, consisting of figures, signs, formulas, and equations. This symbolic system is usually intermixed with the common symbolic system of the English language. The approach to learning the mathematical symbolization, as with any symbolic system, should proceed from actual experience with the thing or concept to the language symbol, not from the language symbol to the thing symbolized. The adult student must be prepared to know what the various symbols mean, and he must recognize his purpose in reading his materials.

Improving comprehension

It is important that the reading for each new unit be preceded by a preparatory phase during which the instructor and students explore orally the new concept through developmental discussion, demonstrations, and visual and manipulative experiences. During this preparatory phase, new words and mathematical symbols become meaningful, and a background of experience is developed in each pupil which will make the written language comprehensible.

In mathematics, each concept or skill is built upon previously learned concepts and skills. Therefore, at the beginning of the course the instructor should find out the extent of mastery of concepts and skills possessed by the students so that, through review activities, he can prepare each student for the introduction of the new materials to be studied. This review particularly involves an understanding of the precise meanings of the technical terms used.

In reading mathematics textbooks and other materials, it is necessary to grasp meanings which are sharply defined, clear, and unambiguous. The types of passages to be read include statements of principles and generalizations, explanations of processes, and problems for solution.

All of these require slow, careful reading with a high degree of mental concentration. Pupils may need much instruction and guidance in reading of this nature. One helpful technique is to have pencil and paper at hand for making notes or constructing diagrams while reading.

The reading of verbal problems for mathematical solution requires special emphasis. Typically the problems are written in brief, highly compact style, often using many technical words. Some suggested procedures are:

- The adult student may restate the problem in his own words. This forces him to organize his thought. During the process, he may discover a weakness in his own understanding or the instructor may do so.

- The adult student may diagram the problem solution. The diagram helps in clarifying relationships and in keeping the facts available.

- The adult students may role play. By dramatizing a situation involving people, students are aided in visualizing the problem situation.

It should be remembered that reading is thinking, and that problem solving requires both a great deal of thought and also a knowledge of how to attack problems. The mathematics instructor should aim to develop in students a way of thinking about problems so that they can visualize the situation, see relationships, know what the problem is, and understand the steps to be taken toward its solution. The goal is to help students become independent in problem solving by developing a pattern of attack on problems.

Practice should be given in attacking problems which are unstructured, as well as those which are preformulated. A variety of types of problems can be used: problems with insufficient data, problems having unnecessary data, problems involving spatial visualization, problems involving logic, problems which do not have a question and which must be completed by the pupil.

Vocabulary acquisition

The expression "knowledge of word meanings" indicates a knowledge of the concepts expressed by the words. Mere verbalization, that is, the parroting of words, definitions, formulas, and the like, is not the aim of word study. The acquisition of word meanings should be given high priority during the preparation for reading and in all phases of study. Attention should be given not only to strictly mathematical terms, but to certain other categories of words:

- Words in general use which are frequently encountered in mathematics textbooks

- Words with meanings in mathematics that differ from their general meanings or their meanings in other subject areas

- Words whose meanings are more precise in mathematics than the general meanings

Use of structural analysis

It is often helpful for the student to know the meanings of commonly used prefixes, roots, or suffixes. This is particularly true in mathematics when word parts indicate quantities, measurement, or geometric figures. When such a word is encountered, the instructor can bring out the meanings of the word parts. For instance, with the word *binomial*, the teacher might ask the students to recall the meaning of the prefix as used in *bicycle*, *biweekly* and also bring out the meaning of the root, *-nomial*. He might then introduce the related terms *mononomial*, *trinomial*, and *polynomial*. Gradually, as word parts are met again in additional combinations, as in *triangle*, *polygon*, the meanings of the parts are reinforced. Such word study assists the reader in visualizing the concept, as knowing the meanings of the parts of the words *quadrilateral* and *pentagon* bring to mind the geometric figures.

Reading charts, graphs, and tables

It is hardly necessary to emphasize the importance of a systematic teaching of the reading of graphic and tabular materials. For a fund of suggestions in this area, instructors are referred to the Department publication *Graphs and Statistics: A Resource Handbook for Teachers of Basic Mathematics*.

Summary of Reading Skills For Mathematics

The skills list that follows may be used as a checklist during the course. It sets forth skills that are particularly important to full comprehension of mathematical materials.

The student learns to:

- Comprehend factual materials

  Recognize the main idea
    -sense problems
    -define problems

  Recognize details
    -select relevant facts
    -see relationships

  Organize and classify facts

  Note sequence

  Adjust his reading rate to his purpose

- Increase his vocabulary

  Recognize and understand technical terms
    -understand and select exact meanings
    -suit meaning to context

  Use the dictionary, textbook aids, and reference materials

- Understand graphic materials

  Read graphs and diagrams

  Read charts

- Follow directions

- Retain and recall fundamental processes and operations

(See note on page 12.)

SCOPE OF THE PROGRAM IN GRAMMAR AND USAGE

The grammatical principles that should be taught and reinforced in the High School Equivalency Program are those that actually function in the improvement of written and oral expression. Items that are a part of traditional or formal grammar should be eliminated so that more time can be devoted to the mastery of the skills of self-expression. It is advisable to coordinate the teaching of grammar with other subjects in order to avoid treating it as a separate entity.

The following is a listing of the areas deemed important in self-expression. How much of the material is taught or reinforced in the time allotted to grammar and usage in the program depends upon the skills of the students and the time schedule adopted by the school in which the program is presented.

Punctuation
- end punctuation, including: period, question mark, exclamation point
- comma, including: words or phrases in a series, dates, letters, parenthetic expression, appositive, direct address, set off clauses
- quotations, including: direct quotes, titles
- colon, including: introduce a list, salutation in a business letter
- semi-colon: separate clauses of a compound sentence where no conjunction is used

Spelling
- formation of plurals
- formation of possessive forms of nouns
- work with homonyms (especially to, too, two; there, their, they're), antonyms, suffixes, prefixes, tenses of useful verbs

Capitalization
- proper names and proper adjectives
- first word in a sentence
- days of week, months, holidays
- knowledge of when to capitalize and when not to capitalize such words as doctor, professor
- use of small letters for such school subjects as algebra, history
- knowledge of when to capitalize and when not to capitalize east, west, north, south

Usage
- sentence recognition: simple sentence, compound sentence, complex sentence
- dependent and independent clauses
- use of pronouns as subjects, objects, possessives

- verb tenses, including past participle
- recognition of prepositions and prepositional phrases
- agreement of subject and verb
- use of predicate nominatives
- agreement of pronoun and antecedent
- elimination of double negative
- infinitives, participles, gerunds.

Since skill in the use of the sentence is the aim of the program in grammar and usage, practice in the use of the aforementioned skills is very important. Knowledge of the skills themselves is of little value unless they can be put to practical purposes. The provision for the application of these skills should be included in the instructor's plans, preferably during class time, since adults will not often devote time to outside assignments.

Sample Test Questions

Directions: In the space provided on the answer sheet, indicate the number of the word or expression that most nearly expresses the meaning of the word at the beginning of the line.

1. havoc — 1 festival 2 disease 3 ruin 4 sea battle 5 satchel
2. incite — 1 stimulate 2 cut short 3 honor 4 seize 5 understand
3. expedient — 1 heavy 2 wasteful 3 wicked 4 advantageous 5 unnecessary
4. discord — 1 pain 2 rejection 3 interruption 4 conflict 5 address
5. mollify — 1 attack 2 dampen 3 betray 4 decay 5 calm
6. discretion — 1 special privilege 2 individual judgment 3 unfair treatment 4 disagreement 5 embarrassment
7. incongruous — 1 indistinct 2 unsuitable 3 unimportant 4 illegal 5 inconvenient
8. laudable — 1 brave 2 comical 3 peaceful 4 praiseworthy 5 conspicuous
9. emissary — 1 rival 2 secret agent 3 master of ceremonies 4 refugee 5 clergyman
10. banter — 1 tease playfully 2 strut boldly 3 ruin 4 bend slightly 5 relieve

Directions: Indicate which word is misspelled in each group, in the space provided on the answer sheet.

1. 1 awkward 2 synopsis 3 suceeding 4 respectively 5 minimum
2. 1 accelerate 2 strata 3 prairie 4 stomach 5 dramitize
3. 1 compulsory 2 quotient 3 admitance 4 barbecue 5 prepossessing
4. 1 reverberate 2 supplament 3 metrical 4 glistening 5 negligence
5. 1 unfortunatley 2 sausage 3 borough 4 diagnose 5 masquerade
6. 1 chargeable 2 tendency 3 origional 4 rehearsal 5 pursued
7. 1 exhausted 2 excellent 3 cavernous 4 exagerate 5 authentic
8. 1 contemporary 2 resturant 3 bankruptcy 4 perennial 5 cannibal
9. 1 conscious 2 definately 3 imagery 4 reconciliation 5 prophesied
10. 1 insolvent 2 suffrage 3 artifical 4 delirious 5 cessation

Directions: Part or all of each of the following sentences is underlined. Below each sentence are four suggested answers. Decide which answer is correct and place its *number* in the space provided on the answer sheet.

1. They held a big feast to give thanks and praying for help in times to come.
   1 Correct as is
   2 having prayed
   3 to have prayed
   4 to pray

2. The captain recognizing a few faces in the crowd, jumped onto a table and had demanded silence.
   1 Correct as is
   2 The captain, recognizing a few faces in the crowd, jumped onto a table and demanded silence.
   3 The captain, recognizing a few faces in the crowd jumped onto a table and demanded silence.
   4 The captain, having recognized a few faces in the crowed, jumped onto a table and had demanded silence.

3. The roses loveliness and it's life are maintained by insects.
   1 Correct as is
   2 rose's loveliness and its life
   3 rose's loveliness and it's life
   4 rose's loveliness and its' life

4. Everybody except Frances and me remembered to bring excuses.
   1 Correct as is
   2 except Frances and I
   3 accept Frances and me
   4 excepting Frances and I

5. To young people, the importance of these things vary.
1 Correct as is
2 things, vary
3 things varies
4 things, varies

6. The general, with all his soldiers, was captured.
1 Correct as is
2 , with all his soldier's were
3 , with all his soldiers; was
4 with all his soldiers, was

7. He is the boy who's poster was chosen for the contest.
1 Correct as is
2 boy, whose
3 boy whose
4 boy, who's

8. Humbled by the loss of prestige, his plans changed.
1 Correct as is
2 a change in his plans occurred.
3 his plans were changed.
4 he changed his plans.

9. We were not surprised at him loosing his way.
1 Correct as is
2 his losing
3 him for loosing
4 his loosing

10. The prize money is to be divided among you and I.
1 Correct as is
2 among you and me
3 between you and me
4 between you and I

Answers to Sample Test Questions

(1) 3 (2) 1 (3) 4 (4) 4 (5) 5 (6) 2 (7) 2 (8) 4 (9) 2 (10) 1

(1) 3 (2) 5 (3) 3 (4) 2 (5) 1 (6) 3 (7) 4 (8) 2 (9) 2 (10) 3

(1) 4 (2) 2 (3) 2 (4) 1 (5) 3 (6) 1 (7) 3 (8) 4 (9) 2 (10) 3

Teacher Notes

(See note on page 12.)

SCOPE OF THE PROGRAM IN LITERATURE

Short Story

One of the most popular forms of fiction is the short story. By its very nature, brevity, the short story appeals to many adult readers. The busy contemporary life often limits reading time so that one prefers a selection of literature that he can complete in a short period of time. In teaching the short story the instructor should remind the class of the limitations under which an author works. With the limited tools of character, plot, and setting, a writer must weave a narrative to interest the reader.

Definition - A short story is a fictionalized prose narrative covering a limited setting of time and place, a few characters, a simple plot, and a central theme.

Elements
- setting: time - the historical period and/or the time of day; place - location
- characters: main - the hero who overcomes or is defeated by the obstacles placed in his way; secondary - those characters who support or oppose the main character. Those characters who further define the central character. Those characters who analyze the central character or his course of action
- theme: idea that the author is trying to get across to the reader
- plot: action of the story; conflict - problem that must be resolved; divisions such as introduction, rising action, climax, denouement or unraveling, conclusion

Point of View Method of Telling a Short Story
- author's point of view
- first person (I)
- third person (He, She, It, They)
- omniscient author (objective)

Conclusions
- surprise
- fill-in
- logical -- based on preceding incidents

Suggested Readings

Bierce, Ambrose - "A Horseman In the Sky"
Connell, Richard - "The Most Dangerous Game"
DeMaupassant, Guy - "The Necklace"
Harte, Bret - "The Outcasts of Poker Flat"

Hawthorne, Nathaniel - "Dr. Heidegger's Experiment"
Hawthorne, Nathaniel - "Feathertop"
O. Henry - "The Cop and the Anthem"
O. Henry - "The Gift of the Magi"
Irving, Washington - "The Devil and Tom Walker"
Keyes, Daniel - "Flowers for Algernon"
List, Edith - "Joy Ride"
London, Jack - "To Build a Fire"
Poe, Edgar Allan - "The Cask of Amontillado"
Poe, Edgar Allan - "The Telltale Heart"
Steinbeck, John - "Flight"
Stephenson, Carl - "Leiningen Versus the Ants"
Stuart, Jesse - "Split Cherry Tree"
Thurber, James - "The Secret Life of Walter Mitty"

Novel

The novel differs from the short story by offering more than one plot, a greater list of characters, and a more comprehensive setting of time and place. Frequently, characters travel from one place to another, and the action must shift accordingly. The timespan often covers a character's entire life. The novel does not confine itself to one conflict or one plot.

Today, novels are readily available to the reading public in the form of paperbacks. Magazines also contract to print the works of popular novelists.

Definition - A novel is an extended work of prose fiction involving several characters involved in many incidents.

Elements
- setting: time - the period during which the narrative takes place; place - scenes of the action
- characters: main - those characters directly involved in the main plot throughout the book; secondary - those characters who serve as a complement or a contrast to the main characters; those characters who aid or hinder the action of the plot; those characters who serve as a foil for the main characters; those characters who add to the background of the novel
- plot: action of the novel; conflict - problems that must be resolved; divisions such as introduction, rising action, climax, denouement or unraveling, conclusion; subplots - minor plots that add to the interest of the novel
- theme: author's purpose in writing the work and his view on one aspect of life

Point of View Method of Narrating a Novel
- author's point of view
- first person (I, We)
- third person (He, She, It, They)
- omniscient author (Objective)

Types of Novels
- mystery
- romance
- adventure
- historical
- fictionalized biography
- science fiction

Suggested Readings
- Barrett, William - *Lilies of the Field*
- Buck, Pearl - *The Good Earth*
- Ferber, Edna - *Cimarron*
- Hemingway, Ernest - *A Farewell to Arms*
- Hemingway, Ernest - *The Old Man and the Sea*
- Hersey, John - *A Bell for Adano*
- Knowles, John - *A Separate Peace*
- Lane, Rose W. - *Let the Hurricane Roar*
- Lee, Harper - *To Kill a Mockingbird*
- MacLean, Alistair - *The Guns of Navarone*
- McCullers, Carson - *The Heart Is a Lonely Hunter*
- Sinclair, Upton - *The Jungle*
- Steinbeck, John - *Of Mice and Men*
- Steinbeck, John - *The Grapes of Wrath*
- Steinbeck, John - *The Pearl*
- Wharton, Edith - *Ethan Frome*

Nonfiction

With the great emphasis placed upon nonfiction writing, the instructor should teach his students to read biographies, autobiographies, and works of nonfiction with a critical mind. The adult reader must be instructed as to the purpose of the book. Naturally a biography concerning a political figure written during an election year by a member of the opposing party would be biased. Along this same vein a biography written to gain votes would present only the favorable aspects of the candidate's personality. In current biographies the reader must not only consider the subject of biography but also the author and his purpose.

Books of true experience concern an actual event that has taken place. Often these books will emphasize the event taking place rather than the persons involved in the undertaking.

Definition - Nonfiction encompasses those prose works that relate a person's life story or an important segment of his life, give the details of a true experience, or give factual information on a particular topic.

Elements
- methods of presentation: chronological — step-by-step according to the passage of time; flashback — shifting from the present to the past
- characters: main — about whom the story is written; secondary — those characters who aid or hinder the main character; those characters whose opinions lead to a better understanding of the main character

- purpose: the desire to present a philosophy by which the main character lives; the need to justify oneself to the public; the desire to entertain; the desire to inform the reader about certain facets of a person's life; the desire to help others by giving good or bad examples on the conduct of one's life

Types

- biography — the story of a person's life written by another person
- autobiography — the story of a person's life written by himself
- true experience — the story of a particular noteworthy true adventure
- factual — book giving information on a particular topic

Suggested Readings

Brown, Claude - *Manchild in the Promised Land*
Donovan, Robert - *PT-109*
Graham, Frank - *Lou Gehrig: A Quiet Hero*
Graziano, R. - *Somebody Up There Likes Me*
Griffin, John - *Black Like Me*
Gunther, John - *Death Be Not Proud*
Heyerdahl, Thor - *Kon-Tiki*
Heyerdahl, Thor - *Aku-Aku*
Keller, Helen - *The Story of My Life*
Killilea, Marie - *Karen*
Killilea, Marie - *With Love from Karen*
Lord, Walter - *A Night to Remember*
Lord, Walter - *Day of Infamy*
Piersall, J. and Hirschberg, Albert - *Fear Strikes Out*
Rowan, Carl T. - *The Story of Jackie Robinson*
Sands, Bill - *My Shadow Ran Fast*
Tregaskis, Richard - *Guadalcanal Diary*
Tregaskis, Richard - *Vietnam Diary*
Waters, Ethel - *His Eye Is on the Sparrow*

Drama

In this unit the instructor should emphasize the limitations placed upon a playwright. In constructing the plot he must consider the limitation of setting that is placed upon him. Too many shifts in action and place would make a play difficult to produce.

A writer for the screen play or television must be aware of the properties and machinery available to add to the dialogue of his play.

Definition - A drama is a narrative written in the form of dialogue to be presented before an audience.

Elements

- setting: time - the period in which the action occurs; place - location
- characters: central; supporting
- plot: exposition, inciting force, rising action, climax, falling action, and conclusion

Types of Drama
- tragedy
- comedy
- farce
- melodrama
- musical plays
- chronicle plays
- satire

Divisions of the Play
- acts - natural division of a play, consisting of one or more scenes
- scenes - division of an act usually referring to a section with a change of characters or a shift in time or place
- episode - division of events within a scene

Suggested Plays

Beven, Donald and Trzcinski - *Stalag 17*
Connelly, Marc - *Green Pastures*
Gibson, William - *The Miracle Worker*
Hansberry, Lorraine - *A Raisin in the Sun*
Kanin, Garson - *Born Yesterday*
Kesserling, Joseph - *Arsenic and Old Lace*
Lindsay, Howard and Crouse, R. - *Life with Father*
Miller, Arthur - *Death of a Salesman*
Patrick, John - *Teahouse of the August Moon*
Van Druten, John - *I Remember Mama*
Wilder, Thornton - *Our Town*

Poetry

In this unit the instructor should emphasize the ability of a poet to express some of man's deepest feelings in few words. In addition to this expression of emotion, many poets write in this literary form to tell a story, to teach a lesson, to share humor, to state a particular philosophy, or to record an historical event.

Definition - A poem is a composition usually expressed in rhythmical fashion.

Forms
- rhymed verse
- blank verse
- free verse
- rhymed couplet

Types of Verse: narrative - epic, ballad, limerick; lyric - ode, sonnet, elegy, hymn

Poetic Devices
- simile
- metaphor
- alliteration
- onomatopoeia

- personification
- hyperbole
- apostrophe

Suggested Readings

Dickinson, Emily - "I'm Nobody"
Dickinson, Emily - "My Life Closed Twice"
Dickinson, Emily - "The Bustle in the House"
Frost, Robert - "Birches"
Frost, Robert - "Out-Out"
Frost, Robert - "Stopping by Woods on a Snowy Evening"
Hardy, Thomas - "The Man He Killed"
Hughes, Langston - "Let America Be America Again"
Kipling, Rudyard - "If"
Markham, Edwin - "The Man with a Hoe"
Masters, Edgar Lee - "Lucinda Matlock"
Poe, Edgar Allan - "Annabel Lee"
Robinson, Edwin Arlington - "Miniver Cheevy"
Robinson, Edwin Arlington - "Richard Cory"
Sandburg, Carl - "Chicago"
Sandburg, Carl - "Clean Curtains"
Sandburg, Carl - "Grass"
Sandburg, Carl - "The Fog"
Service, R. W. - "The Cremation of Sam McGee"
Whitman, Walt - "Miracles"
Whitman, Walt - "When I Heard the Learned Astronomer"

Essay

In teaching the essay, the instructor should emphasize that this type of writing is extremely personal. The author presents his own viewpoint on a topic rather than reporting straight factual details on the issue.

Magazines frequently present the opinions of well-known people on various topics. *Life* magazine, for example, presents essays on timely topics.

In teaching the essay, the instructor should make use of student writings emphasizing the point that the essay covers only one defined subject.

Definition - An essay is a relatively short prose work in which an author expresses his own opinion on a topic.

Types
- formal: serious tone; weighty topic
- informal: conversational tone; less serious topic
- specialized: magazine articles, newspaper editorials, speeches, sermons, character sketches
- critical reviews: books, movies, television shows, plays

Suggested Readings

Faulkner, William - "Nobel Acceptance Speech"
Keller, Helen - "Three Days to See"
Lamb, Charles - "A Dissertation upon Roast Pig"
Lincoln, Abraham - "Gettysburg Address"
Mawhinney, George M. - "Invasion from Mars"
White, William Allen - "Mary White"

Periodicals

This particular unit should emphasize the form and content of various newspapers and journals. An instructor should have his class consider the content, form, purpose, and editorial point of view of the publications.

In this unit a study of the various writing techniques should be considered. Pupils should learn to discover the difference between fact and opinion.

Newspaper
- physical format - allocation of space, technical aspects: type-set, size
- special features - classified ads, feature columns, comics, society news, editorials, human interest stories, obituaries, weather report, special features: horoscopes, puzzles

Propaganda Devices: bandwagon, card stacking, editorializing, glittering generalities, name calling, plain folks, testimonial, transfer

Magazines
- format of individual journals
- special interest periodicals: business - *Business Week, Changing Times, Fortune;* current interest - *Ebony, Life, Look, Saturday Evening Post, Time, Newsweek, U. S. News and World Report;* sports - *Field and Stream, Sports Illustrated;* women's magazines - *Good Housekeeping, Ladies Home Journal, McCall's*

Humanities

This section on the humanities focuses on an appreciation of the arts rather than on an historical background as found in the social studies unit. The instructor should emphasize individual characteristics found in works of art and the place of artistic works in our contemporary world.

Considerations in Judging a Work of Art: sincerity, universality, magnitude, craftsmanship

Elements of the Fine Arts: subject, medium, line, color, texture, perspective, form, style

Elements of Music: rhythm, melody, dynamics, harmony, texture, form, style

Areas for Consideration

- architecture: classic styles; modern architects
- sculpture: recognized sculptors of the past - contemporary sculptors
- dance: modern dance; ballet
- music: musical comedy, jazz, operetta, opera, classical, semiclassical
- photography: photography as an art; famous photographers - Margaret Bourke-White, Edward Steichen
- cinemaphotography: techniques of film-making - flashback, fade-out, panoramic view; representative films - *The Red Balloon, The Bicycle Thief,* underground films
- painting: famous artists of the past; contemporary artists

Sample Test Questions

Directions: Below *each* of the following passages you will find one or more questions or incomplete statements about the passage. Each question or statement is followed by five words or expressions numbered 1 through 5. Select the word or expression that most satisfactorily completes *each in accordance with the meaning of the passage* and write its *number* in the space provided on the answer sheet.

PASSAGE A

1 I pray to be the tool which to your hand
2 Long use has shaped and moulded till it be
3 Apt for your need, and, unconsideringly,
4 You take it for its service. I demand
5 To be forgotten in the woven strand
6 Which grows the multicoloured tapestry
7 Of your bright life, and through its tissues lie
8 A hidden, strong, sustaining, grey-toned band.
9 I wish to dwell around your daylight dreams
10 The railing to the stairway of the clouds
11 To guard your steps securely up, where streams
12 A faery moonshine washing pale the crowds
13 Of pointed stars. Remember not whereby
14 You mount, protected, to the far-flung sky.

1. In this poem, the poet addresses himself to
   1 anyone who reads the poem
   2 a carpenter, a weaver, or a dreamer
   3 a loved one
   4 a very unhappy person
   5 an artist

2. In lines 4 through 8, the poet conveys his desire to
   1 be appreciated by others
   2 become a source of strength
   3 live in contentment
   4 create something beautiful
   5 brighten the life of a friend

3. In lines 9 through 11, the poet implies that the person whom he addresses
    1 may need assistance
    2 distrusts his dreams
    3 is very carefree
    4 wastes time daydreaming
    5 bathes in "faery moonshine"

4. In this poem, the attitude of the poet is one of
    1 indifference
    2 derision
    3 resentment
    4 despair
    5 unselfishness

PASSAGE B

And now that I am afflicted by this dull ache within my breast that my doctors cannot heal; now that I am like a forest tree under the woodman's axe and ere long God will lay me low like an outworn tower; and my awakenings are no longer the proud awakenings of youth, when limber are the sinews and every thought is buoyant—even now have I found my consolation, which is not to let myself be cast down by these portents of a failing body, nor overborne by infirmities which are base and personal, locked up within me, and to which the historians of my empire will not accord three lines in their chronicles. Little matters it that my teeth are loosening, my cheeks sagging—and indeed it were unseemly to crave the least pity on that score. Nay, anger wells up within me at the mere thought of it! For these flaws are in the vase alone, not in its contents.

They tell me that when my neighbor in the East was stricken with a palsy, and one side of him grew cold and numb, and he needs must drag with him everywhere that dead half of himself which smiled no more, even so he lost nothing of his dignity, but, rather, profited by this ordeal. To those who praised him for his strength of mind he answered scornfully that they forgot who he was, and bade them keep such eulogies for the tradesfolk of the city. For a ruler, if he begin not by ruling over his own body, is but a ridiculous usurper. I reckon it no loss but an amazing boon that today I have freed myself a little more from life's empire.

Thus is it with old age. True, all that awaits me on the downward slope is unfamiliar. But my heart is full of my dead friend and, gazing at the villages with eyes drained dry by my loss, I wait for love to flood through me again, like a returning tide.

5. The narrator thinks of youth as a time of
1 military prowess
2 excessive vanity
3 impersonal troubles
4 undue optimism
5 gay animation

6. The narrator finds consolation in the fact that he can preserve his
1 wealth
2 health
3 keen intellect
4 personal dignity
5 love of mankind

7. The narrator is saddened by the
1 unfamiliar path that lies ahead
2 death of a valued friend
3 presence of ridiculous usurpers
4 palsy of his neighbor to the East
5 eulogies offered for tradesfolk

8. The narrator looks to the future with
1 strong misgivings
2 renewed determination
3 unseemly sadness
4 angry passion
5 no consolation

9. The narrator indicates that he is the victim of
1 the mental dullness that comes with long life
2 an operation that has partially crippled him
3 the infirmities of advanced years
4 an old wound inflicted in his youth
5 a palsy that has laid him low

10. The one thing above all that the narrator does *not* want is
1 power
2 riches
3 envy
4 understanding
5 pity

11. The passage implies that the "neighbor in the East" was a
1 revolutionary
2 historian
3 tradesman
4 ruler
5 weakling

12. The narrator is probably
1 an aging monarch
2 an elderly historian
3 a political prisoner
4 a skilled craftsman
5 a dedicated teacher

Answers to Sample Test Questions

(1) 3 (2) 2 (3) 1 (4) 5 (5) 5 (6) 4 (7) 2 (8) 2 (9) 3 (10) 5

(11) 4 (12) 1

(See note on page 12.)

SCOPE OF THE PROGRAM IN SOCIAL STUDIES

The background which students bring to the program varies so widely in knowledge and degree of sophistication that the instructor must be extremely flexible in organizing instruction for each class, group, or even individual. It is *not* intended that all of the following material be included in any instructional program. In meeting specific needs of individuals, entirely separate programs may be advisable. Generally, the instructor may find that major emphasis should be placed upon one or two areas in the social sciences.

It must also be emphasized that the development of concepts, rather than rote memorization of facts remote from the experience and needs of the students, is basic to success in the program. The following material is not to be considered a listing of details which the student should be taught, but rather the range of content to be used in developing the essential conceptual background needed by the students.

The aims of the program include:

- To develop understanding of current social and political problems
- To develop the habit of critical thinking
- To develop historical perspective relating to current problems
- To develop skill in interpreting social studies materials
- To widen and deepen basic concepts of man's social order

The instructor should select those of the following topics which are of the greatest importance to the students in his class. In most instances it would be advisable to select topics primarily in the area of United States history (pages 68-70).

Modern World History (The Western Heritage)

The Cultural Heritage of Modern Europe
- classical heritage: values and contributions from the Greeks and Romans
- significance of medieval traditions: the manorial and feudal systems, the Church, development of towns, ideas from Moorish and Asian sources

The Emergence of Modern Europe
- economic and social change after 1400: commercial revolution, trade, finance, capitalism, rise of middle class
- rise and growth of nation-states, trend to autocracy
- renaissance in science, technology, art, and learning
- religious changes, with varied responses in various nations

The Rise of Democratic Societies
- continuing revolution in thought in the seventeenth and eighteenth

centuries: impact of the Enlightenment
- decline of autocracy and age of democratic revolutions: Puritan, Glorious, American, French
- evolution of democratic principles and constitutions: parliamentary government, individual rights, rule of law, equality

Industrialism, Nationalism, and Europe's Self-Confident Era
- Industrial Revolution: origin, spread, acceleration, changes in character, impact on society
- history of decades of relative stability after the defeat of Napoleon, continued democratic gains, nationalism, evolving ideologies (Marxism and others)
- fostering of technology, intellectual and artistic achievement in both the older and the newly unified nations

Europe's New Age of Colonialism
- imperial expansion: motivations, factors making it possible, major events in European penetration into Africa and Asia
- effects of the new imperialism: on the imperial powers, on colonial peoples, on hopes for international peace and progress

Conflicting Ideologies and Twentieth Century Conflict
- Russian revolutions and the soviet state
- fascist dictatorships and post-war democracies
- Europe and the Cold War: polarization into two camps, moves toward European unity
- shrinking of empires, degree of continuing cultural influence
- shifting power blocs in Europe and in the United Nations

Europe in the Mid-Twentieth Century World
- changes in the ways of living and thinking
- achievements in science, literature, and the arts
- trend to economic and social planning; commitment to economic growth

United States History

The New Nation (to 1800)
- gaining independence, principles of the Declaration
- making and launching the Constitution: the framers, their wisdom and experience, the democratic heritage, framework and functions of the new government
- the Federalist era: test of the new Nation

The National-Republican Period (1800-1825)
- acquiring and exploring new territories: Louisiana, Florida
- growth of urban centers in a rural society
- presidential policies in domestic and foreign affairs
- economic and industrial changes
- development of the Supreme Court: Marshall's decisions
- foreign crises and wars
- national trends following the War of 1812: tariff, westward migration, Era of Good Feeling, internal improvements, Monroe Doctrine

The Age of Jackson (1825-1840's)
- political and social changes: reforms, reformers, and reform movements; writers, progress of democracy
- territorial growth: Oregon, Texas, the homespun culture moving west, population trends

Division and Reunion (1850's-1880)
- characteristic features of life in various regions
- Civil War: leaders and significance
- achievements and problems of reconstruction governments: unsolved problems in North-South relations and in goals for the Negro, origins of twentieth century human rights revolution

Economic Expansion (1865-1900)
- industrial and business expansion: a new age of invention, rise of new industries, building of great fortunes (Rockefeller, Carnegie)
- political trends: civil service and other reforms, policies toward business
- changes in living: small town and rural life, the western frontier, the growing cities
- new immigrants: labor conditions

United States, a World Power (1900-1940)
- changes of the Progressive Era: political, economic, social
- World War I and the peace movement
- boom, depression, and the "New Deal"
- foreign policies and moves toward war

United States, a World Leader (1940-present)
- World War II, peace and the Cold War
- United Nations: regional blocs and alliances
- conflicts: Korea, Cuba, Viet Nam
- domestic programs from "Fair Deal" to "Great Society"

The Federal Government and Civic Responsibility
- structure and functions of the Federal Government
- government and politics: federal-state relations
- political and civic rights and duties of the individual United States citizen

The American People
- immigration: progress from segregation to assimilation, immigration restrictions, immigration today
- contributions of many groups to our culture

Government and Politics
- theoretical and structural framework under the Constitution
- the Presidency and the executive branch: focus of domestic, world, and moral leadership; outstanding Presidents from George Washington to our day
- the legislative branch: legislative and special functions, the lobby, examples of extraordinary leadership of individual Congressmen and Senators throughout our history

- the judicial branch: historical backgrounds of judicial review, leading judges from Marshall to the present day, regional and local courts
- practical politics and the party system: historical development and present status

American Economic Life
- evolution of governmental role in the economic system: from virtual laissez-faire to regulation and participation, the continuing debate over the proper role of government
- how the American economic system functions: historic changes, economic barometers, the technological revolution
- comparison with other economic systems in the world today

The United States in World Affairs
- historical relationship between commitment and power: isolation, involvement, and leadership in peace and in war
- the United States and modern blocs: role in the United Nations
- problems of foreign policy today: the dilemmas of modern ideological clashes

Asian and African Culture Studies (World Regional Studies)

World Cultures Today
- review of identifying culture patterns
- major world culture regions: interaction of man and his environment
- culture change: review Islamic World as introduction to Africa and Asia

Africa South of the Sahara: Land and People
- major regions: geographic assets, limitations, and variations
- African peoples: ethnic patterns, social organization, cultural achievements

Africa South of the Sahara: Historic Trends
- historical background: medieval civilizations and kingdoms
- effects of European colonial expansion, rise of African nationalism
- the new nations: leaders, problems, and progress
- world role of the new Africa

South Asia: India and Pakistan
- physical features: effects of geographic diversity
- historical background: special influence of religion
- British rule and struggles for independence, political structure today, involvement in world issues
- economic and social problems: village and urban life, adaptations to change
- cultural trends and achievements

China
- geographic diversity: interaction of man and environment
- development of traditional ways: family, education, religion, culture patterns

- history: ages of power and cultural achievement, repeated alien invasions
- domestic and foreign pressures of nineteenth and twentieth centuries, response to those pressures
- China under Communism: changes within the nation, China as a world problem

Japan
- geographic influences on life in the islands
- development of cultural traditions: interactions with Chinese culture
- history: imperial and military traditions, modernization, struggle for world power status
- changes in life and thought since World War II

Southeast Asia
- physical features of continental and insular areas
- culture patterns: similarities and differences, influences from India and China
- historical survey: impact of the West, new nations, leaders, governments, ideologies
- life of the people: impact of "revolution of rising expectations"
- Southeast Asian problems as world problems

Sample Test Questions

Directions: Below *each* of the following passages you will find one or more questions or incomplete statements about the passage. Each question or statement is followed by five words or expressions numbered 1 through 5. Select the word or expression that most satisfactorily completes *each in accordance with the meaning of the passage* and write its *number* in the space provided on the answer sheet.

Passage A

The average citizen today is knowledgeable about "landmark" court decisions concerning such questions as racial segregation, legislative appointment, prayers in the public schools, or the right of a defendant to counsel in a criminal prosecution. Too often, however, he thinks that these decisions settle matters once and for all. Actually, of course, these well-publicized court decisions are merely guideposts pointing toward a virtually endless series of vexing legal questions. It is often more difficult to determine how far the courts should travel along a road than to decide what road should be taken.

Illustrations of this difficulty exist in all areas of the law, and especially in those most familiar to the lay public. For example, this Nation could hardly fail to agree that state-compelled racial segregation in the public schools is a denial of the equal protection of the laws guaranteed by the 14th amendment. The real difficulty lies in determining how desegregation shall be accomplished and how to solve the problem of *de facto* school segregation, perpetuated by the practical if unfortunate realities of residential patterns.

Similarly, there was substantial editorial approval of the Supreme Court's initial decision that grossly inequitable legislative apportionment was a proper matter for judicial scrutiny. The traditional democratic ideal of majority rule, it was argued, could not be subverted by apportionment schemes which at times appeared to give the rural voter twice the electoral strength of his urban counterpart. But when this principle was extended to render unlawful the composition of virtually every state legislature in the Nation, the reaction to such an extension received as much attention as the apportionment decision itself.

1. According to the author, the effect of many decisions in the courts has been to

   1 make startling headlines
   2 lead to more legal complications
   3 contradict the Constitution
   4 deny states' rights
   5 provide final solutions to many problems

2. The author implies that, in so far as important court decisions are concerned, the public today is generally

   1 disinterested
   2 mystified
   3 critical
   4 well-informed
   5 disapproving

3. According to the author, the Court's decision on legislative apportionment was based on the principle of

   1 majority rule
   2 electoral strength
   3 equal protection under the law
   4 legal precedents
   5 judicial tradition

4. As used in the passage, the word "landmark" (line 1) most nearly means

   1 exciting
   2 just
   3 significant
   4 publicized
   5 legal

Passage B

There is a wholesale turnover of mine labor every forty-five days in Turkish coal basins. This uneconomic ebb and flow of manpower is seriously hampering Turkey's ability to exploit the richest bituminous coal deposits in the Middle East. It has focused attention on the need for solving the human equation in the industrialization of predominantly agrarian societies.

Money wages are the lure that brings peasants streaming into the region.

But the lack of adequate housing and the attraction of traditional village life periodically cause the "miner" to return to his family and farm in the countryside. No one can explain why the men work just forty-five days in the pits and spend a similar period in their villages before returning to begin the cycle anew.

About a day and a half of production is lost every time the underground working force changes. Moreover, there is a period of slack output before and after each changeover that further complicates the task of raising miner productivity from its present level of one-half ton a day. An American miner produces about 6.8 tons a day. Despite the fact that virtually the same workers return to the mines year after year, the forty-five-day cycle handicaps even the simplest on-the-job training.

5. The title that best describes the ideas of this passage is:

   1 Forsaking the farm for industry
   2 Problems in Turkish coal production
   3 The lure of high wages in Turkey
   4 Modern production methods
   5 Utilization of manpower

6. According to the passage, Turkey is presently engaged in

   1 building up its agricultural production
   2 improving living conditions in small villages
   3 converting to an industrial economy
   4 building up a larger work force for its mines
   5 lowering unemployment

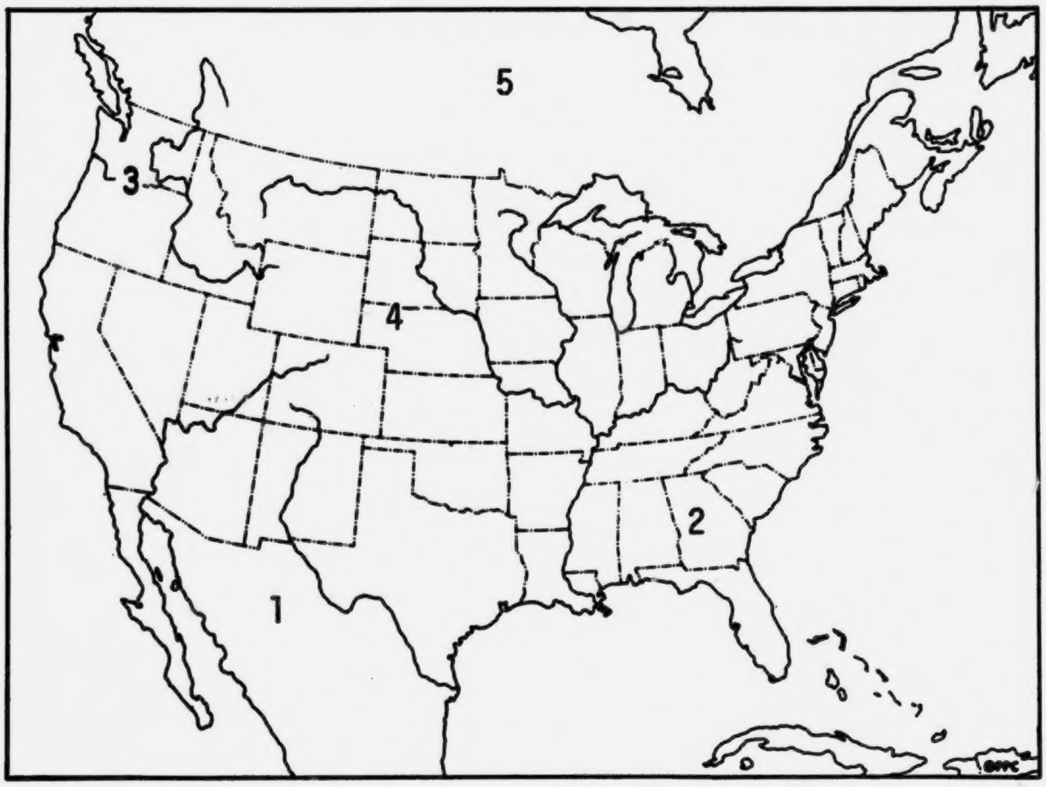
7. The turnover of personnel indicated in the passage results in

   1 lower wages for the miners
   2 increased agricultural production
   3 disintegration of village life
   4 lower coal production
   5 more housing developments

8. The passage seems to suggest that

   1 human nature is unpredictable
   2 Turks are inherently lazy
   3 the introduction of American mining machinery would automatically increase mine output
   4 Turkish villages contain many up-to-date conveniences
   5 Americans and Turks have common problems in coal mining

Directions: Write on the answer sheet the *number* that indicates the location referred to in questions 9 and 10.



9. Which general area is closest to the line 55° North Latitude?

10. Which general area did the United States claim as a result of the Lewis and Clark expedition?

Directions: Write on the answer sheet the *number* of the correct choice in question 11. Refer to the chart below.

TRADE OF THE COLONIES WITH GREAT BRITAIN — ANNUAL AVERAGES IN THOUSANDS OF POUNDS STERLING

	1701–1710		*1731–1740*		*1761–1770*	
Colony	*Export*	*Import*	*Export*	*Import*	*Export*	*Import*
New England	37	86	64	197	113	358
New York	10	28	16	92	62	349
Pennsylvania	12	9	12	52	35	295
Maryland-Virginia	205	128	394	207	468	491
Carolinas	14	22	177	94	330	262
Georgia	..	..	..	3	36	40

11. It can be inferred from the chart that, during the period 1701-70, the most heavily settled part of the colonies was

1 Maryland-Virginia
2 the Carolinas
3 New England
4 New York

Directions: Write on the answer sheet the *number* of the correct choice for questions 12 and 13. Refer to the table below.

A Comparison of the Work Time Required to Purchase Certain Consumer Items

Item	*United States Worker*	*Soviet Union Worker*
Bread, 1 lb. loaf	6 min.	36 min.
Potatoes, 1 lb.	1½ min.	6 min.
Beef roast, 1 lb.	19 min.	1½ hr.
Butter, 1 lb.	19 min.	3½ hr.
Sugar, 1 lb.	3 min.	54 min.
Milk, 1 qt.	7 min.	36 min.
Man's shoes	7 hr.	54 hr.
Man's wool suit	23 hr.	244 hr.
Soap, 3½ oz.	2½ min.	28 min.

12. One general conclusion based on the chart is that the

    1 lack of natural resources in the Soviet Union causes shortages of products
    2 purchasing power of the Soviet worker is high
    3 prices in the Soviet Union are lower than prices in the United States
    4 Soviet worker's real income is much lower than the real income of a United States worker

13. Which conclusion can best be drawn from the chart comparing the work time required to purchase certain consumer goods by the worker in the United States with that of the worker in the Soviet Union?

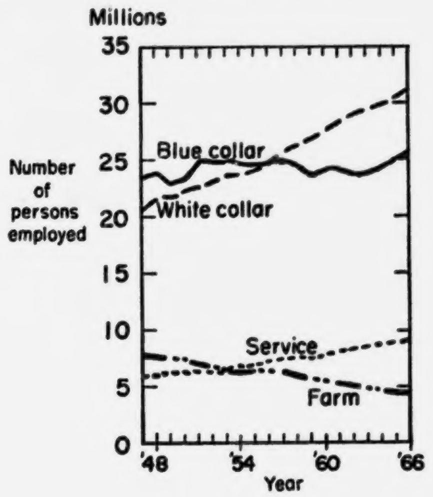
    1 Basic necessities consume a greater percentage of the income of the Soviet worker than that of the United States worker.
    2 Russian products cost at least six times as much as the products in the United States.
    3 The gap in relative purchasing power is the same for each product
    4 The United States worker is more ambitious than the Soviet worker.

Directions: Write on the answer paper the *number* of the correct choice for question 14. Refer to the graph at the right.

14. When the graph is read with a background knowledge of farm and factory production, it can be concluded that technology has had the greatest effect on the productivity of

    1 blue-collar workers
    2 white-collar workers
    3 service workers
    4 farm workers

Occupational Trends in Civilian Employment (1948-66)
(Millions of persons)

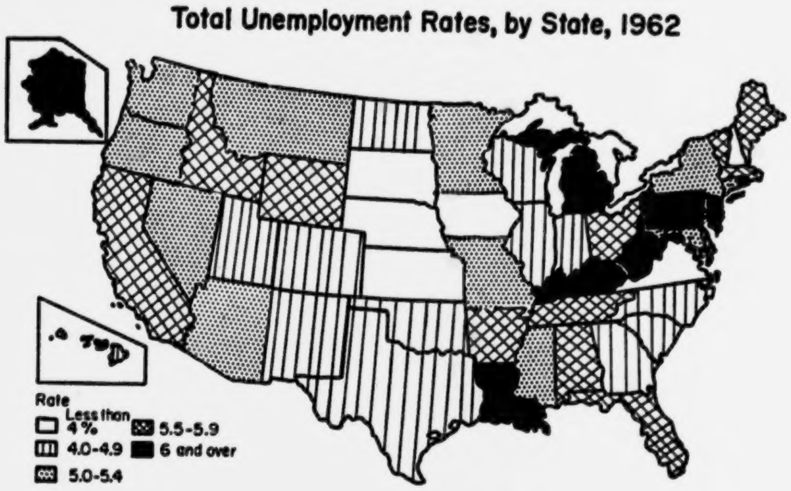


Directions: Write on the answer sheet the *number* of the correct choice for question 15. Refer to the map at the right below.

15. As one judges by the map, he might say that in its "war on poverty" the federal government will probably need to concentrate most of its efforts on the

1 Appalachian Mountain Region
2 Gulf States
3 New England Region
4 "Old Northwest"

Total Unemployment Rates, by State, 1962



Directions (16-18): For *each* statement or question, write on the separate answer sheet the *number* of the word or expression that, of those given, best completes the statement or answers the question.

16. Which is the most valid conclusion to be drawn from a study of the Negro civil rights movement in 20th century United States?

1 More actual progress has been made in the last 15 years than in any other 15-year period since 1900.
2 Black nationalist movements have canceled any gains that have been made.
3 Additional legislation would tend to be duplicative.
4 Negro leadership has generally been ineffective.

17. One particular criticism that some law enforcement officers have leveled at recent Supreme Court decisions is concerned with the

1 extension of the right of a defendant to counsel
2 expansion of federal police power
3 lenient attitude towards civil rights demonstrators
4 elimination of capital punishment for major crimes

18. A basic function of congressional investigating committees in the legislative process is to

1 provide Congress with information that may be helpful in enacting legislation
2 permit interested citizens to participate indirectly in the legislative process
3 prevent delays in the enactment of legislation
4 enable citizens to use the constitutional right of petition in a constructive fashion

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Answers to Sample Test Questions

(1) 2 (2) 4 (3) 1 (4) 3 (5) 2 (6) 3 (7) 4 (8) 1 (9) 5 (10) 3

(11) 1 (12) 4 (13) 1 (14) 2 (15) 1 (16) 1 (17) 1 (18) 1

(See note on page 12.)

SCOPE OF THE PROGRAM IN MATHEMATICS

If mathematics is presented in a structureless, mechanical way without the unifying concepts represented by the language, then the language alone is artificial. These materials should not be labelled "new" or "modern," since they represent basic concepts and principles of mathematics. A unified theme has been followed in developing the sequence of topics.

Problems have been indicated as areas of emphasis throughout the outline. No attempt has been made to construct suitable problems; these will be developed for the next phase of the program. It is probable that the instructor may wish to construct problems based on the needs of his particular class.

At appropriate points in the course, reference should be made to the use of intuitive approaches and manipulative devices. The Department emphasizes the desirability of the use of paper folding, models, movable figures, and other kinesthetic as well as audio and visual materials wherever possible. Regardless of chronological age, students need to approach a totally new concept constructively, then formally. Materials must explore, describe, or disclose the concept in its structural characteristics; for example, a filmstrip on the solution of problems may be an effective review technique, but is not an example of a constructive device, whereas the cutting or folding of paper polygons to obtain area relationships is.

Basic Structure of Arithmetic

Set Concepts
- finite and infinite sets
- intersection and union of sets
- disjoint sets
- the null set
- subsets
- equivalent sets

The Set of Whole Numbers
- writing a numeral
- place-value and expanded notation
- rounding whole numbers
- addition and multiplication (repeated addition): commutative and associative properties of addition and multiplication, additive identity (0), the multiplicative identity (1), the distributive law, the reasonableness of answers, estimation, checking
- subtraction and division: their existence as inverse operations, the concept of division as repeated subtraction, reasonableness of answers, estimation, checking

- factoring: primes and composite numbers, special sets such as the set of even numbers, divisibility, greatest common factor, least common multiple, whole number exponents, scientific notation
- mathematical sentences: closed sentences (true or false), equality and inequality ($<$, $>$, $\neq$), order of operations

The Set of Rationals
- simple and complex fractions
- proper and improper fractions
- mixed fractions
- addition and subtraction: least common multiple applied to the process
- multiplication and division: multiplicative inverse or reciprocal, the application of the principle $\frac{a}{b} \times \frac{c}{d} = \frac{ac}{bd}$ (b and d $\neq$ 0) to simplify and to multiply
- decimal fractions: meaning, basic operation, terminating and repeating, common fraction equivalents for some decimals, rounding
- applications: money problems, work problems, averaging, estimation of the reasonableness of answers

The Set of Irrationals
- the completion of the set of real numbers; nonterminating, nonrepeating decimal
- the subset set of radicals: simplifying; addition, subtraction, multiplication, and division; computing square root; square root tables

Basic Structure of Algebra

The Language of Algebra
- placeholder
- algebraic phrases
- simplifying phrases
- evaluation of algebraic phrases when values are assigned to the placeholders
- order of operations
- translation of words into algebra

The Sentences of Algebra
- simple equations and inequalities where the variable is of degree one (solution sets may be singular, null, the entire real set)
- sentences joined by "and" and "or"
- graphic representation of the solution set on the number line
- verbal problems
- checking
- estimating answers

The Tools of Algebra

Multiplication
- the distributive law
- the product of two binomials

Factoring
- common monomial
- difference of two squares
- general trinomial
- perfect square trinomial
- equations solved by factoring
- applied problems
- estimation
- checking

Fractions
- reducing
- the four operations
- fractional equations
- applied problems
- estimating
- checking

Extension of Arithmetic

Ratio and Proportion
- definition
- solution by means-extremes property developed through algebraic techniques
- problems

Variation
- direct variation
- inverse variation
- problems

Percent
- a proportions approach
- problems in interest, discount, commission, percent of increase and decrease

Graphs
- pictogram
- bar
- line
- circle
- analysis of all four types
- construction

Nonmetric Geometry

Undefined Terms
- points (colinear and coplanar)
- lines
- planes

Defined Terms Based on the Three Basic Types
- straight, curved, broken
- horizontal, vertical, oblique

- intersecting, parallel, skew

Angles

- acute, obtuse, straight, right
- adjacent, vertical, complementary, supplementary, right

Parallel Lines and a Transversal

- special angle relationships

Simple, Closed Figures

Congruence

- concept of congruent segments and symmetry
- congruent figures
- the use of translation and rotation to illustrate congruence

Polygons

- regular polygons
- classification according to number of sides
- triangle classified according to sides and angles
- sum of the angles of a triangle
- sum of any two sides of a triangle
- the quadrilateral (parallelogram, rectangle, rhombus, square, trapezoid)
- diagonal of polygons
- tesselations
- partition and assembly problems

Congruent Triangles

- SAS, ASA, SSS assumptions
- identification of corresponding angles and corresponding sides

Similar Triangles

- definition
- identification of corresponding angles and corresponding sides

Circles

- definition
- special line segments and lines
- arcs
- concentric circles
- central angle

Solids

- recognition and basic features of the polyhedron, prism, pyramid, cylinder, cone, and sphere
- rotation of plane figures about an axis to obtain solid figures
- some exercises in the drawing of three-dimensional figures

Coordinate Geometry

The Cartesian Plane

- the set of real numbers and the line
- the association of a pair of numbers with a point in the plane

- ordered pair
- abscissa
- ordinate
- coordinates
- axis
- origin

The General Linear Equation, $y = mx + b$

- graphing by table
- slope-intercept method
- X and Y intercepts

Graphic Solution of Sets of First-Degree Equations

- the intersection of two sets
- parallel lines
- intersecting lines
- coincident lines
- sets of equalities and inequalities

Algebraic Solution of Sets of First-Degree Equations

- methods of eliminating a variable (method of substitution, possible solution sets)
- checking

Problems

- distance (current, wind affecting velocity)
- digit
- mixture

The General Quadratic, $y = ax^2 + bx + c$

- factoring procedures
- general characteristics

Measurement

Perimeter and Circumference

- units of measure of circle and polygons (metric and U.S. system)

Area

- meaning
- appropriate square units
- rectangle
- parallelogram
- square
- trapezoid
- triangle
- circle
- problems applying formulas

Three-Dimensional Figures

- lateral area and total surface area for standard prism, pyramid, cylinder, cone, and sphere
- volume, its meaning; prism, pyramid, cylinder, cone, and sphere
- problems applying these formulas

Indirect Measurement
- approximate measures
- accuracy and precision
- tools of measurement

Finding Unknown Distances
- review of pythagorean theorem
- the use of congruent triangles
- use of similar triangles
- scale drawings

Trigonometry
- introduced through similar triangles
- sine, cosine, and tangent of angles between 0° and 90°
- use of tables to find angles to the nearest degree
- finding an unknown side of a right triangle or an altitude of a triangle
- problems
- estimation
- extent of accuracy
- checking

Additional Topics

Statistics
- measures of central tendency
- use of the normal curve

Probability
- probability of success or failure
- odds

Construction in Geometry
- use of straight edge and compass
- connection with locus theorems
- use in graphics, design, drafting

Sample Test Questions

Directions: Write on the answer sheet the *number* that identifies the correct answer to each question or problem.

1. Four million two hundred thousand twenty, written in figures is

   (1) 4,220 (3) 4,200,200

   (2) 4,200,020 (4) 4,220,000

2. Air is made up of one part oxygen and four parts nitrogen. The ratio of oxygen to nitrogen in air is

   (1) 1:4 (2) 1:5 (3) 5:1 (4) 4:1

3. The average of 6, 10, and 20 is

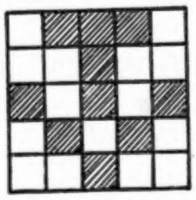
   (1) 10 (2) 12 (3) 26 (4) 36

4. If the numerator and the denominator of a fraction are both multiplied by 2, the value of the fraction is
(1) multiplied by ½ (3) divided by 2
(2) multiplied by 2 (4) unchanged

5. Fifty minutes is what fractional part of an hour?
(1) $\frac{1}{2}$ (2) $\frac{3}{4}$ (3) $\frac{5}{6}$ (4) $\frac{6}{25}$

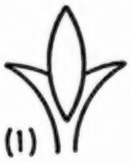
6. Which fraction most accurately represents the part of the year remaining after August 31?
(1) $\frac{1}{2}$ (2) $\frac{2}{3}$ (3) $\frac{1}{3}$ (4) $\frac{1}{4}$

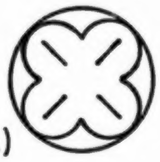
7. What percent of the figure is shaded?
(1) 25%
(2) 40%
(3) 50%
(4) 60%

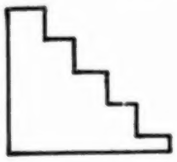


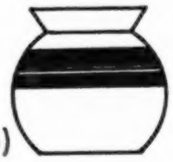
8. A class with 12 pupils has a 200% increase in size. How many pupils are there in the class now?
(1) 14 (2) 24 (3) 36 (4) 48

9. Which figure is *not* an example of symmetry?

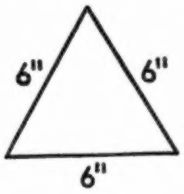

(1)


(2)

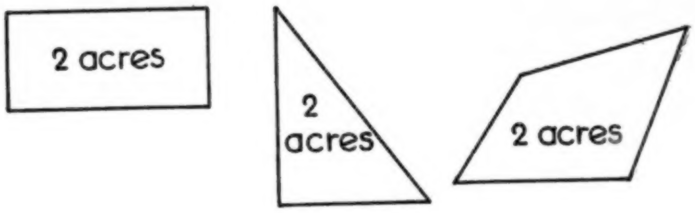

(3)


(4)

10. In the figure below, the number of degrees in each angle is
(1) 30
(2) 45
(3) 60
(4) 180



11. Which geometric idea is illustrated by the three plots of ground pictured below?

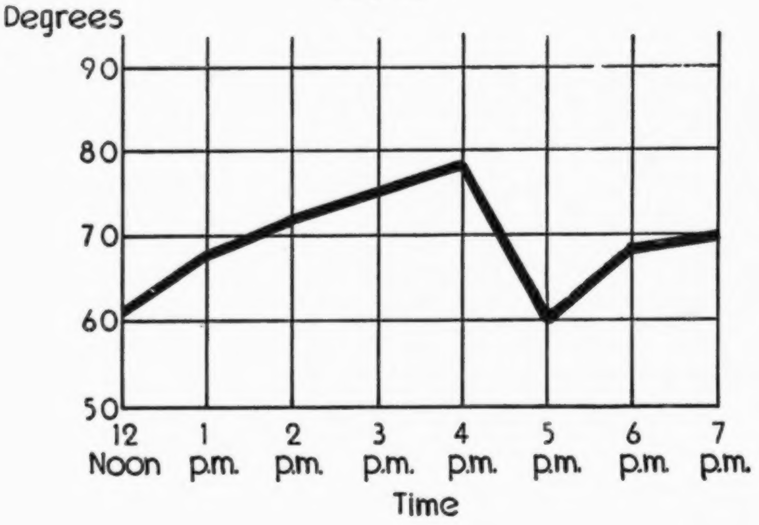


(1) equality (2) symmetry (3) congruence (4) similarity

12. One-inch cubes were used to form a one-foot cube. How many of the small cubes does the bottom layer of the large cube contain?
(1) 12 (2) 24 (3) 48 (4) 144

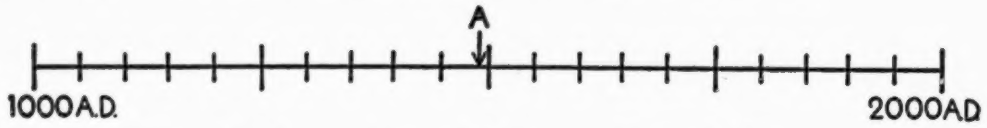
The graph at the right shows the afternoon temperature readings made by a student in a science class. Use this graph to answer question 13.

AFTERNOON TEMPERATURE READINGS
May 12



13. About how many degrees had the temperature changed from 2 p.m. to 4 p.m.?
(1) 6 (2) 2 (3) 10 (4) 16

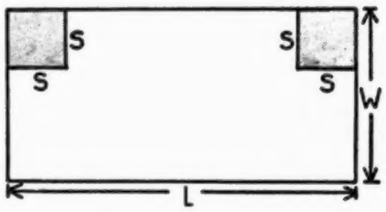
14. The time line below represents the length of time between 1000 A.D. and 2000 A.D. It has been divided into equal periods of years. Approximately what date is represented by arrow A?



(1) 1492 (2) 1776 (3) 1910 (4) 1942

15. Three times a number *n* increased by 4 may be expressed as
(1) $n + 12$ (2) $3n + 4$ (3) $3n - 4$ (4) $7n$

16. The area of the unshaded portion of the figure is
(1) $2L + 2W + 4S$
(2) $2LW - 2S^2$
(3) $LW - 2S^2$
(4) $LW - 4S$



17. What is $\sqrt{50}$?
(1) $5\sqrt{2}$ (2) $25\sqrt{2}$ (3) $50 \div 2$ (4) 2,500

18. Subtract $20\frac{1}{2}$ from $28\frac{13}{16}$

(1) $8\frac{1}{4}$ (2) $8\frac{5}{16}$ (3) $8\frac{3}{8}$ (4) $8\frac{7}{16}$

19. Multiply: $2\frac{3}{4} \times 1\frac{1}{2}$

(1) $2\frac{1}{3}$ (2) $4\frac{1}{8}$ (3) $5\frac{1}{2}$ (4) $16\frac{1}{2}$

20. Divide: $9\frac{3}{8} \div 6\frac{1}{4}$

(1) $\frac{2}{3}$ (2) $1\frac{1}{2}$ (3) 3 (4) $58\frac{19}{32}$

21. A clock regularly sells for $27.50. How much money is saved if the clock is bought at a 20% discount?

(1) $.55 (2) $2.20 (3) $5.50 (4) $22

22. A well-lighted room should have a window area equal to at least 20% of the floor area. A room is 30 feet long and 24 feet wide. According to this standard, what is the smallest number of square feet of window area that this room should have?

(1) 21.6 (2) 28.8 (3) 144 (4) 288

23. The Mills family put part of their savings into eight $100 bonds. Each bond pays simple interest at 2.5% a year, the interest being paid every 6 months. How much interest do the Mills receive every 6 months on their eight bonds?

(1) $10 (2) $20 (3) $100 (4) $200

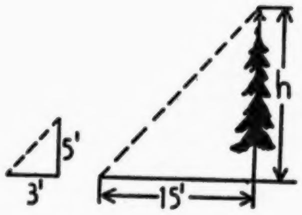
24. A tree casts a shadow 15 feet long at the same time that a pole 5 feet high casts a 3-foot shadow. Which proportion will make it possible to find the height of the tree?

(1) $\frac{h}{5} = \frac{15}{3}$

(2) $\frac{5}{h} = \frac{15}{3}$

(3) $\frac{h}{15} = \frac{3}{5}$

(4) $\frac{5}{15} = \frac{3}{h}$



25. If the universal set $U = \{1, 2, 3, 4, 5\}$, which of the following is *not* a subset of U ?

(1) $\{0\}$ (2) $\{\ \}$ (3) $\{1, 2, 3\}$ (4) $\{1, 3, 5\}$

26. The solution of the open sentence $x + 1 = x + 2$ is

(1) $\{-1\}$ (2) $\{0\}$ (3) $\{\ \}$ (4) {all real numbers}

Answers to Sample Test Questions

(1) 2 (2) 1 (3) 2 (4) 4 (5) 3 (6) 3 (7) 2 (8) 3 (9) 3 (10) 3

(11) 1 (12) 4 (13) 1 (14) 1 (15) 2 (16) 3 (17) 1 (18) 2 (19) 2

(20) 2 (21) 3 (22) 3 (23) 1 (24) 1 (25) 1 (26) 3

(See note on page 12.)

SCOPE OF THE PROGRAM IN SCIENCE

Science is a method which involves questioning, exploring, experimenting, observing, measuring, concluding, and communicating. It is further a body of organized knowledge containing data, relationships, and theories upon which investigations are carried out. A method of science is flexible, and scientific exploring is done in books as well as in laboratories. Experimentation must always be controlled and no conclusion should ever be accepted as absolute proof.

One of the major objectives of any course in science is to develop the basic skills used by scientists. The following skills are considered vital to the proper development of a scientific attitude.

- Ability to identify and define a problem
- Ability to develop a control for an experiment
- Ability to observe carefully
- Ability to collect data
- Ability to organize data
- Ability to analyze data
- Ability to interpret data
- Ability to collect evidence
- Ability to formulate an hypothesis
- Ability to test an hypothesis
- Ability to predict the effects of known causes
- Ability to establish causes from known effects
- Ability to generalize conclusions
- Ability to devise a new experiment

What Science Is
- an attitude of wonder
- a method of questioning, exploring, analyzing, concluding
- a body of organized knowledge

Tools of Science
- numbers and units
- fundamental quantities of distance, mass, time
- derived quantities of area, volume, temperature, pressure, rates, direction
- instruments for scientific measurement

Properties of Matter and Changes in Matter
- physical and chemical properties
- physical and chemical changes

Introduction to Atomic Structure
  - protons, electrons, neutrons
  - simple atomic model (Bohr)
  - periodic table
  - arrangement - atomic numbers

Radioactivity
  - nuclear reaction
  - detection

Common Chemical Changes
  - simple representative examples
  - simple explanation based on periodic table
  - chemical shorthand

Common Compounds and Mixtures
  - acids, bases, salts
  - solutions and suspensions

Forces
  - direction and amount
  - balanced and unbalanced
  - gravitation

Forces and Work
  - work
  - energy
  - power
  - machines

Forces and Fluids
  - density
  - pressure
  - Pascal's Law
  - Archimedes' Principle
  - Bernoulli's Principle

Force and Motion
  - speed
  - velocity
  - acceleration
  - Newton's Laws of Motion
  - conservation of momentum

Electric Energy
  - static electricity
  - current electricity

Magnetism
  - magnetic fields
  - kinds of magnets
  - induced voltage

Light
- electromagnetic radiation
- intensity and illumination
- reflection of light
- refraction of light
- color

Sound
- sources
- characteristics of sound waves
- reflection
- resonance

Heat Energy
- internal energy
- heat
- temperature
- transmission of heat energy
- phases of matter
- expansion

Conservation of Energy

The Earth's Surface
- surface features
- mantle and bedrock
- minerals and rocks
- the oceans
- topographic maps

Changes in the Earth's Surface
- destructional forces
- constructional forces
- vulcanism

Age of the Earth
- the rock record
- the earth's history

The Solar System
- Copernican system
- the moon
- the sun
- eclipses
- planets
- other solar satellites

Our Galaxy
- stars
- star groups

Beyond Our Galaxy
- types of galaxies

- nebulae
- theories of the universe

Measurement of Time and Place
- rotation of the earth
- revolution of the earth
- direction on the earth
- correlation of time and place
- time and place in space

Principles of Space Travel
- reaction principle
- propulsion of space vehicles
- rocket guidance
- flight paths

Provisions for Safety and Comfort in Space Travel
- reduced air pressure
- g-forces
- radiation
- weightlessness

The Earth's Atmosphere
- general characteristics
- composition of air

Investigating and Predicting Weather Changes
- investigating the atmosphere
- weather forecasting
- U.S. Weather Bureau

Energy and Motion in the Atmosphere
- energy and its transfer
- atmospheric motions

Water from the Atmosphere
- hydrologic cycle
- condensation and sublimation
- precipitation
- cloud seeding

Synoptic Weather Features
- air masses
- highs and lows
- fronts

Severe Weather Phenomena
- thunderstorms
- tornadoes
- hurricanes

Climate
- relationship to weather

- classifying climates
- climate of New York State
- value of climate study

Kinds of Living Things
- characteristics
- adaptations
- classification

Survival of Living Things
- obtaining food, nutrition
- types of reproduction
- life cycles in animals and plants

Ecology
- interdependence of living things
- balance of nature

Conservation
- pure air and water
- wild life
- forest
- soil

Fundamental System Structures in Man
- cells
- tissues
- organs

Fundamental System Functions in Man
- perception - senses
- protection - skin
- support - skeleton
- locomotion - muscle (machines in man)
- intake and elimination of gases - respiration
- distributing fluids - circulation
- feeding cells - ingestion, digestion
- eliminating wastes - excretion

Energy in Man
- source and supply - securing, storing fuels
- conserving energy - consuming fuels, oxidation
- measuring energy - food and calories

Developing Beneficial Patterns of Behavior in Man
- inborn automatic behavior
- acquired automatic behavior
- understanding how learning takes place - perception, memory, reason, action

Sample Test Questions

Directions: Write the number of the word or expression that best completes each statement or answers each question. Base your answers on the information given in the passage or chart.

Passage A

"Typhoid bacilli appear in dozens of strains, each identified in terms of its susceptibility to a certain virus, or bacteriophage. The phage type of the guilty bacilli in Aberdeen, Scotland, is No. 34, which is almost unknown in Britain."

1. This statement refers to the fact that
   1 typhoid fever is caused by a virus
   2 each type of bacteriophage is very specific in its action on strains of typhoid bacilli
   3 people are susceptible to different strains of bacteriophage
   4 each strain of typhoid bacteria dissolves only one kind of bacteriophage

Passage B

Under certain conditions, hydra differentiate into sexual forms which reproduce by sperm and eggs. In a study of this process of sexual differentiation, one researcher investigated the effect of adding CO_2 gas to the culture water in each of four containers in such manners as to vary the percent of CO_2 in the water. Some of his data are as follows:

Container No.	1	2	3	4
CO_2 percentage	0.0%	0.18%	1.75%	4.62%
Day	Percentage of sexual forms			
7	0	0	0	0
8	0	0	0	0
9	0	10	70	70
10	0	60	100	100
11	0	70	100	100
12	0	100	100	100
13	0	100	100	100

2. According to the data shown in the table, what is the relationship between the percent of carbon dioxide in the water and the speed with which complete sexual differentiation is achieved?
   1 There is no clear relationship between the two variables at any point on the chart.
   2 After 0.18% is reached, there is no increase in the speed.
   3 After 1.75% is reached, there is no increase in the speed.
   4 The speed increases proportionately throughout the range from 0.0% through 4.62%.

3. Regardless of the amount of CO_2 in the culture medium, sexual differentiation (if it appears at all) will probably first appear on the
   1 7th day
   2 9th day
   3 12th day
   4 13th day

Passage C

Mr. Thomas Gold, director of Cornell University's Center for Radiophysics and Space Research, which operates the Arecibo observatory, then outlined the argument that the pulsars are, in fact, fast-spinning neutron stars. The latter consist of a tight ball of neutrons, the electrically neutral particles of the atomic nucleus. A normal atom can be likened to the solar system in that it consists largely of open space with a tiny, very dense nucleus in its center and electrons flying about it at various distances. In a neutron star there is no such space. It is believed to form when a star considerably larger than our sun (which is 864,000 miles in diameter) burns up its fuel and collapses into an object 10 miles wide. With none of the thermonuclear reactions that make a star shine, such a star would be invisible at any great distance. Mr. Gold noted that three of the most perplexing features of the pulsars could be explained if they were neutron stars: their rigid pulse rate, the unusual tempo of that rate, and the absence of obvious visible sources for the emissions. There are many highly rhythmic phenomena in astronomy, such as the spin of the earth and the movements of two stars around one another. But rhythms of a second or less are difficult to explain except in terms of small, extremely dense bodies--namely neutron stars.

4. The atomic particles chosen by Mr. Gold in his attempt to explain pulsars are

    1 electrons with a negative electric charge
    2 atoms with a positive charge
    3 electrically neutral particles
    4 atoms with large dense nuclei

5. Our ability to see a neutron star

    1 is simple since the star is very bright
    2 is difficult because it is too small
    3 is impossible since it has no thermonuclear reactions
    4 depends upon the star's rate of spin

6. The unusual tempo and rigidity of the pulse rate together with the apparent absence of obvious visible sources have led Mr. Gold to conclude that the signals are coming from

    1 the collapsed matter of a star which has burned up its fuel
    2 intelligent beings signalling from space ships in outer space
    3 the instruments in the Arecibo observatory at Cornell University
    4 a cloud of largely open space with a tiny, very dense nucleus in its center and electrons flying about at various distances

7. Based on this passage, we could conclude that there is evidence of

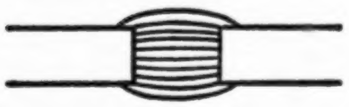
    1 intelligent life existing on several planets
    2 the total absence of intelligent life except on the earth
    3 nothing which proves or disproves the existence of intelligent extra-terrestrial life
    4 intelligent human beings on neutron stars

8. As a result of reading this article, we must agree that

1 a pulsar is a neutron star
2 a pulsar has a diameter of 10 miles
3 Dr. Gold has offered the only possible explanation for pulsars
4 a reasonable explanation of pulsars fits in with other observed astronomical phenomena

Directions (9-14): Write the *number* preceding the word or expression that, of those given, best completes the statement or answers the question.

9. Which of the following magnetic field arrangements is *not* possible?

(1)


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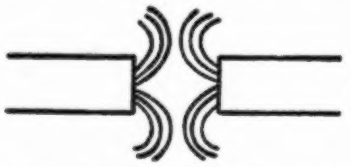
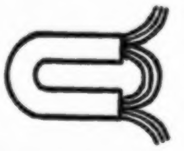
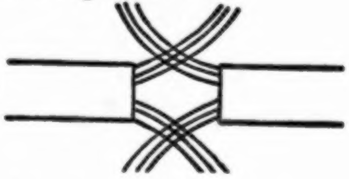


(3)


(4)


10. A long steel suspension bridge may sag several inches in summer because

1 greater traffic in summer causes increased weight on the bridge
2 sunlight makes steel brittle
3 heat causes steel to expand
4 heat softens steel

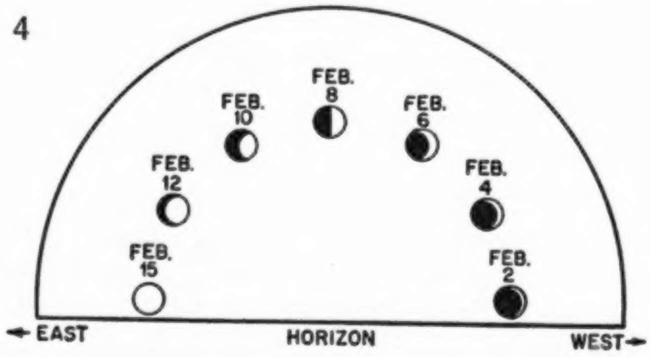
11. In the *Periodic Table*, the elements are arranged in order of increasing

1 atomic size
2 atomic mass
3 atomic number
4 ionization energy

12. In the balanced reaction $4NH_3 + XO_2 \rightarrow 4NO + 6H_2O$, X represents the number

(1) 5 (2) 6 (3) 3 (4) 4

The diagram illustrates positions and phases of the moon as observed from the same location in New York State at 6 p.m. on 7 days during February. The observable, illuminated portion of the moon at each position is not shaded in the diagram.



13. The change in position and illumination is primarily the result of the

1 rotation of the moon
2 revolution of the moon
3 rotation of the earth
4 revolution of the earth

14. If the moon were eclipsed, which portion of the lighted disk would be dark first?

1 upper 2 lower 3 eastern 4 western

Answers to Sample Test Questions

(1) 2 (2) 3 (3) 2 (4) 3 (5) 3 (6) 1 (7) 3 (8) 4 (9) 4 (10) 3

(11) 3 (12) 1 (13) 2 (14) 3

STUDENT GENERAL INFORMATION FORM

Name ______________________________ Date of Birth ______________
(last) (first) (middle)

Address ____
(street) (city) (state) (phone)

Present Occupation ____________________ Marital Status ____________

School Last Attended ____________________________________
(name) (address)

____
(date attended)

Have you taken any other adult education courses? ______ If yes, give course titles and school where taken.

(1) ____________________________________

(2) ____________________________________

(3) ____________________________________

(4) ____________________________________

(5) ____________________________________

HIGH SCHOOL EQUIVALENCY STUDENTS ONLY

Last grade attended ______________

State reason(s) for withdrawing from school.

State reason(s) for desiring equivalency diploma.

Office use only

INCOMPLETE APPLICATIONS WILL BE RETURNED

APPLICATION FOR STATE HIGH SCHOOL EQUIVALENCY DIPLOMA

(Applicant must sign application in presence of school official. School official will mail application with proper fee to official testing center.) Applicant must answer all questions.

For use of Albany office only

PERSONAL INFORMATION

1. Name [*Last, first, middle*]: (Please print.)
Mr.
Miss
Mrs.

2. I desire to be tested in the month of

3. Legal residence [*No., street, city, State, zip code*]: (Please print.)

4. Telephone number:

5. Height:

6. Weight:

7. Color of eyes:

8. Color of hair:

9. Check one: ☐ Nonveteran ☐ Veteran ☐ Now a member of Armed Forces

10. Date of birth: Month— Day— Year—

11. Place of birth [*City or town, State*]

12. Are you 21 years of age or over? Yes ☐ No ☐
(If No, complete 12*a*, 12*b*, 12*c*, and 12*d*.)

(If under 21, application must be accompanied by Form 603A — Certificate of Withdrawal.)

12*a*. Circle highest grade completed: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11

12*b*. Date withdrawn from full-time enrollment in school: Month— Day— Year—

12*c*. Name of school last attended full time:

12*d*. Address of school last attended full time:

TESTING DATA

13. Have you previously taken the High School Equivalency Examination (GED Tests) at an official testing center of the New York State Education Department? ☐ Yes ☐ No

If yes, where? 1. [*Location of center*] When? [*Month*] [*Year*]

2. [*Location of center*] When? [*Month*] [*Year*]

(If you have taken the High School Equivalency Examination more than once, list the most recent examination first. Failure to comply with the retesting regulations, as outlined on the reverse side of this application, will invalidate the examination of the applicant.)

14. Are you applying for the High School Equivalency Diploma on the basis of USAFI GED Tests taken in service? ☐ Yes ☐ No

If yes, where? [*Station*] When? [*Month*] [*Year*] Service Serial No.*

15. Are you applying for the High School Equivalency Diploma on the basis of the USAFI GED Tests taken at a civilian center of the GED Testing Service located outside of New York State? ☐ Yes ☐ No

If yes, where? When? [*Month*] [*Year*]

16. Are you applying for the High School Equivalency Diploma so you may qualify for further education or training? ☐ Yes ☐ No

CERTIFICATION

I hereby apply to the Regents of the State of New York for a New York State High School Equivalency Diploma. I certify that I have not been issued a New York State Regents High School Diploma and that the above statements are true to the best of my knowledge. I certify also that I am a permanent resident of New York State or am submitting with this application a Certificate for Nonresidents (Form DET 603C). My fee of $6 is attached.

[*Signature of applicant*]

I certify that I have inspected this application and find the information is accurate to the best of my knowledge and that the applicant is qualified as a candidate for the High School Equivalency Diploma. The applicant's signature was affixed in my presence.

Date

[*Signature of school principal or counselor*]**

[*Official title*]

County of

[*Name of school and address*]

---

* Veterans and members of the Armed Forces applying on the basis of tests taken in service must provide their service serial number. Failure to do so will result in the return of the application.

** If the applicant is a member of the armed services, the term "school principal or counselor" may be interpreted to mean a commissioned officer of his unit. Veterans must have application signed by school principal or notary.

The University of the State of New York
The State Education Department
Bureau of Higher and Professional Educational Testing
Albany, New York 12224

HIGH SCHOOL EQUIVALENCY TESTING PROGRAM

CERTIFICATE OF WITHDRAWAL
AS A
FULL-TIME STUDENT

Directions to Candidates: Before having this Certificate of Withdrawal as a full-time student completed, be sure to read and to follow the instructions on the reverse side.

NOTICE: THIS CERTIFICATE IS VOID IF THERE ARE ANY ERASURES OR ALTERATIONS ON IT.

This certifies that

____________________ of ____________________
Name of Candidate Address of Candidate

has not been regularly enrolled as a student in a full-time school

program of instruction since ____________________. According to school
Month Day Year

records, the candidate's date of birth is ____________________
Month Day Year

To my knowledge, this school is the last one the candidate attended.

____
Date

____
Signature of Principal

____
Name of School

____
Typed or Printed Name

____
Stamp or Seal of School

HIGH SCHOOL EQUIVALENCY TESTING PROGRAM
INSTRUCTIONS TO DIPLOMA CANDIDATES WHO ARE OVER 18 BUT UNDER 21 YEARS OF AGE FOR SUBMITTING CERTIFICATE OF WITHDRAWAL AS A FULL-TIME STUDENT

Candidates between 18 and 21 who have not yet taken the GED Tests or have not obtained satisfactory scores on the Tests:

You may be eligible to take the High School Equivalency Examination if your last attendance as a regularly enrolled student in a full-time school program of instruction was at least one year prior to the date you are to take the Examination.

You will be admitted to the Examination only if you meet all eligibility requirements and after the testing center has received (1) your completed application, (2) the required fee, and (3) this Certificate of Withdrawal completed by the school you last attended.

Carefully follow this procedure:

(1) Type or print in ink your full name and address on this Certificate.
(2) Ask the principal* of the school you last attended as a full-time student to complete the Certificate and return it to you.
(3) Attach both this completed Certificate and the fee to your application.
(4) Follow the application procedures outlined on the reverse side of the application.

Candidates between 18 and 21 who have already obtained satisfactory scores on the GED Tests:

You may be eligible to receive the New York State High School Equivalency Diploma, without further testing, providing:

(1) that your last attendance as a regularly enrolled student in a full-time school program of instruction was at least one year ago, and
(2) that you took the Tests at a recognized center for the administration of GED Tests. The tests may have been taken outside of New York State or while in the Armed Forces.

Before a diploma can be issued, you must meet all eligibility requirements, and the High School Equivalency Office of the State Education Department must receive (1) your completed application, (2) the required fee, and (3) this Certificate of Withdrawal.

Carefully follow this procedure:

(1) Type or print in ink your full name and address on this Certificate.
(2) Ask the principal* of the school you last attended as a full-time student to complete the Certificate and return it to you.
(3) Attach both this completed Certificate and the fee to your application.
(4) Submit the application with attached fee and Certificate, in person, to the school principal most convenient to you. Have proof with you of both your age and your identity.
(5) Ask the principal to certify the application and to forward it directly to the High School Equivalency Office.

*For this certificate, "principal" may be interpreted to mean a responsible school official of the school the candidate last attended as a full-time student.

PROGRAMED AND SELF-DIRECTED MATERIALS

Using Programed and Self-Directed Materials

Programed and self-directed materials may be particularly useful in High School Equivalency classes because they make it possible for the instructor to work efficiently with students of widely varying educational backgrounds and needs. The following is a partial listing of such materials that are currently available, organized by subject. No effort has been made by the Bureau to evaluate these materials. Inclusion here is not intended as an endorsement of any specific item on the list. Most publishers are willing to provide examination copies to interested directors and teachers upon request. The instructor will have to evaluate the particular materials he intends to use in the light of the particular needs of the individual students who are to use them.

LIST OF PROGRAMED AND SELF-DIRECTED MATERIALS

Title	Publisher	Price
GRAMMAR AND USAGE — COMPOSITION		
Programmed English, Composition and Creative Writing	Macmillan	$ 5.80
GRAMMAR AND USAGE — GRAMMAR		
Agreement of Subject and Verb: Programed English Skills	Heath	.96
Capitalization: Programed English Skills	Heath	.96
Commas: Programed English Skills	Heath	.96
English Syntax	Harcourt	3.80
English 2200: A Programmed Course in Grammar and Usage with Mastery Tests, Gr. 7-8	Harcourt	2.80
English 2600: A Programmed Course in Grammar and Usage with Mastery Tests, Gr. 9-10	Harcourt	3.

English 3200: A Programmed Course in Grammar and Usage	Harcourt	$ 4.
Lessons For Self-Instruction in Basic Skills: Capitalization	McGraw	
Series C-D, Gr. 5-6		1.
Series E-F, Gr. 7-8		1.
Lessons for Self-Instruction in Basic Skills: English Language	California Test Bureau	
Capitalization C-D		1.
Punctuation C-D		1.
Sentence Patterns C-D		1.
Verbs C-D		1.
Lessons for Self-Instruction in Basic Skills: Punctuation	McGraw	
Series C-D, Gr. 5-6		1.
Series E-F, Gr. 7-8		1.
Lessons for Self-Instruction in Basic Skills: Sentence Patterns	McGraw	
Series C-D, Gr. 5-6		1.
Series E-F, Gr. 7-8		1.
Lessons for Self-Instruction in Basic Skills: Verbs, Modifiers and Pronouns	McGraw	
Series C-D, Gr. 5-6		1.
Series E-F, Gr. 7-8		1.
Modern English Sentence Structure	Singer	5.
Proper Punctuation, Gr. 6-12: Tutor Text	Doubleday	4.95
Punctuation	McMahon	4.75
Punctuation: Modern English Series (TT 102)	Teaching Materials Corp.	8.50

GRAMMAR AND USAGE—SPELLING

Basic Spelling	McMahon	4.75
Help Yourself to Read, Write and Spell (Books 1 and 2)	Ginn	ea. 2.52
Spelling by Principles	Appleton	2.90
Spelling Improvement	McMahon	4.75

Spelling Rules: Modern English Series (TT 101)	Teaching Materials Corp.	$13.50

GRAMMAR AND USAGE—VOCABULARY

Vocabulary Building (Books 1 and 2)	Central Scientific	2.95
Vocabulary Development Program (Vol. 1, Gr. 9; Vol. 2, Gr. 10; Vol. 3, Gr. 11; Vol. 4, Gr. 12)	Scott	ea. 12.90
(2-record album for each volume)		17.20

LITERATURE

Adventures in Literature Series:	Harcourt	
Adventures for Readers		
Book 1		4.44
Book 2		4.56
Book 3		5.
Meaning of Modern Poetry: Tutor Text	Doubleday	5.95
Poetry: A Closer Look	Harcourt	1.60
Programmed Reading	Globe	3.20

MATHEMATICS

Addition of Fractions, Gr. 4-6	Graflex	.65
Adult Adventures in Arithmetic (AA, BA, CA, DA, and EA)	American Book	ea. 2.
Algebra I: TEMAC Programmed Learning	E.B. Press	12.
Arithmetic Facts: Practice Program, Gr. 1-6	Graflex	.65
Arithmetic of the Whole Numbers: TEMAC Programmed Learning	E.B. Press	8.50
Basic Algebra	McMahon	9.55
Basic Mathematics: A Problem Solving Approach	Addison-Wesley	
Book 1		4.
Books 2, 3, 4, and 5		ea. 5.
Basic Mathematics: TEMAC Programmed Learning	E.B. Press	12.
Computing Square Roots, Gr. 7-9	Graflex	.65
Decimals	McMahon	4.75
Decimals and Percentage, Gr. 4-8: Tutor Text	Doubleday	5.95

Decimals and Per Cents, Gr. 5-6	Allyn		$ 1.80
Elementary Arithmetic Series	Teaching Materials Corp.		
Addition and Subtraction (TT 203)			11.
Decimal Numbers (TT 206)			13.50
Fractions: Basic Concepts (TT 205)			11.
Multiplication and Division Facts (TT 204)			11.
Fractions	McMahon		7.15
Fractions, Gr. 5-9: Tutor Text	Doubleday		5.95
Introduction to Algebra	McMahon		11.95
Introduction to Exponents, Gr. 5-8	Harcourt		1.12
Introduction to Verbal Problems in Algebra: TEMAC Programmed Learning	E.B. Press		3.50
Learning About Fractions: Individual Flannel Board, Gr. 3-4	Graflex		.65
Lessons for Self-Instruction in Basic Skills: Arithmetic Fundamentals	California Test Bureau		
Addition A-B			1.
Division A-B			1.
Multiplication A-B			1.
Subtraction A-B			1.
Logarithms	Harper		1.20
Mathematics Enrichment Programs, Gr. 4-6	Harcourt		2.80
Modern Algebra: A First Course	E.B. Press		12.
Modern Mathematics for the Junior High School	E.B. Press		12.
Percent	McMahon		4.75
Perimeters: Individual Tape Measure	Graflex		.65
Plane Geometry	E.B. Press		18.50
Practical Mathematics, Gr. 10-12: Tutor Text	Doubleday		5.95
Preparing for Algebra	E.B. Press		2.75
Programmed Beginning Algebra (5 Units)	Wiley	ea.	2.85
Programmed Mathematics for Adults (Book 1 Basic Addition, 2 Advanced Addition, 3 Subtraction, 4 Multiplication, 5 Division, 6 Fractions, and 7 Decimals)	McGraw	ea.	1.08

Programmed Mathematics for Adults: Application Skills (Book 1 Problems Involving Basic Addition, 2 Problems Involving Basic and Advanced Addition, 3 Problems Involving Subtraction and/or Addition, 4 Problems Involving Multiplication, 5 Problems Involving Division, 6 Problems Involving Fractions, and 7 Problems Involving Decimals)	McGraw	ea. $ .48
Ratio-Proportion-Square Root	McMahon	4.75
Ratios and Proportions, Gr. 4-6	E.B. Press	2.75
Self-Teaching Arithmetic: Knowledge Master Books, Gr. 2-5 (Books 1, 2, 3, 4, and 5)	Scholastic Book Service	ea. 4.95
Seventh Grade Mathematics	E.B. Press	12.
Skill-Slide: An Aid to Learning for Use with Books of Programmed Instruction	Harcourt	.60
Understanding Problems in Arithmetic	Coronet	1.50

READING

Better Reading Books (Book 2, Gr. 6-7; Book 3, Gr. 8-9)	Science Research Associates	ea. 2.40
Help Yourself to Read, Write and Spell (Books 1 and 2)	Ginn	ea. 2.52
How to Become a Better Reader, Gr. 9-12	Science Research Associates	2.75
Lessons for Self-Instruction in Basic Skills: Following Directions (Series C-D, Gr. 5-6; Series E-F, Gr. 7-8; Series G, Gr. 9-12)	McGraw-Webster	ea. 1.
Lessons for Self-Instruction in Basic Skills: Reading Interpretations I (Series C-D, Gr. 5-6; Series E-F, Gr. 7-8; Series G, Gr. 9-12)	McGraw-Webster	ea. 1.
Lessons for Self-Instruction in Basic Skills: Reading Interpretations II (Series C-D, Gr. 5-6; Series E-F, Gr. 7-8; Series G, Gr. 9-12)	McGraw-Webster	ea. 1.
Programmed Reading	Globe	3.20

SCIENCE

Chemistry for Junior High: TEMAC Programmed Learning	E.B. Press	$ 2.75
General Science: Programmed Learning Laboratory (Earth, Energy and Work, Force, Light, Motion, and Simple Machines)	Macmillan	ea. 1.32
Latitude and Longitude	Coronet	1.50
General Science Series The complete set of 4 volumes	Teaching Materials Corp.	44.00

SOCIAL STUDIES—AMERICAN HISTORY

Amendments to the Constitution: A Programed Text	Allyn	1.24
American Constitution: Tutor Text	Doubleday	5.95
American Government (2 Vol.)	Behavioral Research	4.92
American History Study Lessons (9 Booklets)	Follett	4.62
Constitution, Gr. 8-12	Ginn	1.16
Constitution, Gr. 8-12 Program Binder with Sliding Mask	Ginn	2.
Geography of the United States, Central	Behavioral Research	3.32
Geography of the United States, East	Behavioral Research	3.32
Geography of the United States, West	Behavioral Research	3.32
Great Themes in American History (Books 1 and 2)	Central Scientific	ea. 2.95
How a Bill Becomes a Law	Macmillan	3.48
Maps: How We Read Them	Coronet	1.50
Understanding Maps, Gr. 6-9	Allyn	1.12
United States Constitution	Behavioral Research	2.87
Westward Expansion of Our Nation	Coronet	1.50

SOCIAL STUDIES—WORLD HISTORY

World History Study Lessons (9 Booklets)	Follett	4.14

BIBLIOGRAPHY OF BOOKS AND OTHER LEARNING MATERIALS

DIAGNOSTIC TESTS USEFUL IN ADULT CLASSES

Title	Publisher
ABE Student Survey	Educational Opportunities Project
Adult Basic Learning Exam	Harcourt, Brace & World, Inc.
Adult Basic Reading Inventory	Scholastic Testing Service
Gray's Standardized Oral Reading Paragraphs	Bobbs Merrill Co.
Iowa Test of Educational Development	Science Research Associates
Tests of Adult Basic Education	California Test Bureau

Explanatory Note

The following is a supplemental list of textbooks and workbooks which may be used for study and reference along with pamphlets and other learning devices for adults in the high school equivalency program. No specific endorsement is intended for any of the items listed. Many publishers are willing to supply examination copies for interested teachers or directors.

Title	Publisher	Price
GEDT MANUALS		
Barron's How to Prepare for the High School Equivalency Examination	Barron	$ 3.95
High School Certification Through the GED Tests	Holt	2.
High School Equivalency Diploma Tests (Second book)	Arco	4.
High School Equivalency Subjects (five-volume set)	United School Services	27.40
How to Pass High School Equivalency Examination	Cowles	3.95

Preliminary Practice for the High School Equivalency Diploma Test (First book)	Arco		$ 4.

GRAMMAR AND USAGE—COMPOSITION

Correctness and Effectiveness of Expression	Cowles		2.95
English Fundamentals (Forms A, B, and C)	Crowell	ea.	2.50
First Book in American English	Keystone		1.45
Reviewing English, Preliminary	Amsco		.65
Review Text in English Language Arts, Preliminary	Amsco		1.25
RSVP (Books 1, 2, and 3)	Amsco	ea.	1.20
Second Book in American English	Keystone		2.45
Work-a-Text in English (Books 1 and 2)	Cambridge	ea.	1.15

GRAMMAR AND USAGE—GRAMMAR

Basic Skills in Grammar (Books 1 and 2)	Cambridge	ea.	.65
English Grammar Review Book	Keystone		1.
Grammar at Work	Amsco		.60
Grammar for Today	Amsco		.55
Preliminary English, Middle Grades	Cambridge		.40

GRAMMAR AND USAGE—SPELLING

RSVP (Books 1, 2, and 3)	Amsco	ea.	1.20
Spelling	Cambridge		.75

GRAMMAR AND USAGE—VOCABULARY

Building Word Power	Keystone		1.35
Increase Your Vocabulary (Books 1 and 2)	Cambridge	ea.	.65
Program for Vocabulary Growth	Keystone		1.50
RSVP (Books 1, 2, and 3)	Amsco	ea.	1.20
Vocabulary for the High School Student	Amsco		1.35

LITERATURE

Adventures in American Literature, Grade 11 (Volumes 1, 2, 3, and 4)	Harcourt	ea. $	.80
Adventures in Appreciation, Grade 10 (Volumes 1, 2, 3, 4, and 5)	Harcourt	ea.	.60
Adventures in English Literature, Grade 12 Volume 4	Harcourt		.80
Adventures in Reading, Grade 9 Volume 5	Harcourt		.60
Concise English, 3 and 4 years	Cambridge		.75
English Comprehensive	Cambridge		1.
English in Review (3 Years and 4 Years)	Keystone	ea.	1.20
English Literature Review Book 3 Years	Keystone		1.
High School English Refresher Course	Keystone		1.65
Reading Comprehension in Literature	Cowles		2.95
Regents Review of English, 3 and 4 years	Cambridge		1.
Reviewing English	Amsco		.70
Reviewing English, Preliminary	Amsco		.65
Review Text in Comprehensive English	Amsco		1.10
Review Text in English Language Arts, Preliminary	Amsco		1.25

MATHEMATICS

Arithmetic, Intermediate Series, Holt Adult Basic Education Program	Holt	2.60
Basic Algebra, Ninth Year	Cambridge	1.
Basic Review of Mathematics	Cambridge	
Grade 7		1.10
Grade 8		1.25
Comprehensive Tenth Year Mathematics	Amsco	1.80
Concise Course in Arithmetic	Cambridge	.75
Elementary Algebra Question Book	Cambridge	.40

Essentials of Modern Mathematics	Cambridge	$ 1.
Fundamental Mathematics, Advanced Series, Holt Adult Basic Education Program	Holt	2.60
General Mathematical Ability	Cowles	2.95
Learning Activities in Elementary Algebra	College Entrance	1.25
Learning Activities in Geometry	College Entrance	1.25
Mastering Elementary Algebra	Keystone	1.65
Mathematics, A Basic Course	Cambridge	
Book 1		1.10
Book 2		1.25
Ninth Year Mathematics Review Guide	Amsco	1.20
Plane Geometry	Cambridge	1.
Regents Questions and Answers in Ninth Year Mathematics	Amsco	1.
Regents Questions and Answers in Tenth Year Mathematics	Amsco	1.10
Tenth Year Math Question Book	Cambridge	.40
Tenth Year Mathematics Review Guide	Amsco	1.20
Work-a-Text in Modern Mathematics	Cambridge	1.25
Work-a-Text in Modern Mathematics, Grades 7-8	Cambridge	1.25

READING

Better and Faster Reading	Cambridge	1.25
English III, Advanced Series Holt Adult Basic Education Program	Holt	2.60
Lessons in Reading Comprehension	Amsco	.60
Reading for Comprehension, Middle Grades (Books 1 and 2)	Cambridge	ea. .75
RSVP (Reading, Spelling, Vocabulary, Pronunciation) (Books 1, 2, and 3)	Amsco	ea. 1.20

The Road to Better English (Books 1 and 2)	Cambridge	ea. $ 1.

SCIENCE

Concise Course in General Science	Cambridge	.75
General Science Question Book	Cambridge	.40
Graphic Survey of Science	Keystone	1.80
Physical Science, Advanced Series, Holt Adult Basic Education Program	Holt	2.48
Reading Comprehension in the Natural Sciences	Cowles	2.95
Review Text in General Science	Amsco	1.15
Unit Review of General Science	Cambridge	1.
Visualized General Science	Keystone	1.55
Work-a-Text in Science	Cambridge	
(Books 5 and 6)		ea. 1.25
Earth Science		1.35
Life Science		1.35

SOCIAL STUDIES—AMERICAN HISTORY

A History of Our Nation	Cambridge	1.
American History Study Lessons, Reading Level 7-9 (9 Booklets)	Follett	4.77
Chrono-Topical American History	Cambridge	1.
Elementary American History	College Entrance	.75
Mastering American History	Keystone	2.35
Question Book in American History	Cambridge	.40
Reading Comprehension in Social Studies	Cowles	2.95
Reviewing American History	Amsco	1.
Review Text in United States History, Junior High Edition	Amsco	1.40
Study Lessons on Documents of Freedom, Reading Level 6-9	Follett	.96
Unit Outlines in American History	College Entrance	1.

Visualized American History	Keystone	$ 1.65

SOCIAL STUDIES—WORLD HISTORY

Basic World History	Cambridge	1.
Concise Course in Modern History	Cambridge	.75
Mastering World History	Keystone	2.20
Question Book in World History	Cambridge	.40
Quiz Refresher in World History	Keystone	1.20
Reading Comprehension in Social Studies	Cowles	2.95
Review Text in World History	Amsco	1.35
Unit Outlines in World History	College Entrance	.75
Visualized Modern History	Keystone	1.65
Visualized World History	Keystone	1.65
World History Study Lessons, Reading Level 6-9 (9 Booklets)	Follett	4.20

ADDRESSES OF PUBLISHERS

Addison-Wesley Publishing Co., Inc., Reading, Mass. 01867

Allyn & Bacon, Inc., 470 Atlantic Ave., Boston, Mass. 02210

American Book Co., 55 Fifth Ave., New York, N.Y. 10003

Amsco School Publications, Inc., 315 Hudson St., New York, N.Y. 10013

Appleton-Century-Crofts, 440 Park Ave., S., New York, N.Y. 10016

Arco Publishing Co., Inc., 219 Park Ave., S., New York, N.Y. 10003

Barron's Publishing Co., Inc., 113 Crossways Park Drive, Woodbury, N.Y. 11797

Behavioral Research Laboratories, Ladera Professional Center, Box 577,
Palo Alto, Calif. 94302

Bobbs Merrill Co., 4300 W. 62nd St., Indianapolis, Ind. 46206

California Test Bureau, Curricular Publishers Division, Del Monte Research
Park, Monterey, Calif. 93940

Cambridge Book Company, Inc., 45 Kraft Ave., Bronxville, N.Y. 10708

Central Scientific Co., 1700 Irving Park Rd., Chicago, Ill. 60613

College Entrance Book Co., 104 Fifth Ave., New York, N.Y. 10011

Coronet Instructional Films, 65 E. South Water St., Chicago, Ill. 60601

Cowles Education Corporation, Look Building, 488 Madison Ave., New York,
N.Y. 10022

Crowell, Collier & Macmillan, 866 Third Ave., New York, N.Y. 10022

Doubleday & Company, Inc., 277 Park Ave., New York, N.Y. 10017. Orders
to: 501 Franklin Ave., Garden City, N.Y. 11530

Educational Opportunities Project, 1010 W. Washington Blvd., Chicago,
Ill. 60607

Educators Publishing Service, Inc., 301 Vassar St., Cambridge, Mass. 02139

Encyclopaedia Britannica Press, 425 North Michigan Ave., Chicago, Ill. 60611

Follett Publishing Co., 1010 W. Washington Blvd., Chicago, Ill. 60607

Ginn & Company, Statler Bldg., Back Bay P.O. 191, Boston, Mass. 02117

Globe Book Co., 175 Fifth Ave., New York, N.Y. 10010

Graflex, Inc., Program Learning Publication Div., Box 101, Rochester, N.Y. 14601

Harcourt, Brace & World, Inc., 757 Third Ave., New York, N.Y. 10017

Harper & Row Pubs., 49 E. 33rd St., New York, N.Y. 10016. Orders to: Keystone Industrial Park, Scranton, Pa. 18512

Heath & Co., 285 Columbus Ave., Boston, Mass. 02116

Holt, Rinehart & Winston, Inc., 383 Madison Ave., New York, N.Y. 10017

Houghton Mifflin Co., 53 W. 43rd St., New York, N.Y. 10036

Keystone Education Press, 387 Park Ave., S., New York, N.Y. 10036

McGraw Hill Book Co., 330 W. 42nd St., New York, N.Y. 10036

McMahon Electronic Engineering, 381 W. Seventh St., San Pedro, Calif. 90731

Macmillan Co., 866 Third Ave., New York, N.Y. 10022

Scholastic Book Service, 50 W. 44th St., New York, N.Y. . 10036

Science Research Associates, 259 E. Erie St., Chicago, Ill. 60611

Scott Foresman & Co., 1900 E. Lake Ave., Glenview, Ill. 60025. Orders to: 99 Bauer Dr., Oakland, N.J. 07436

Singer, 249-59 W. Erie Blvd., Syracuse, N.Y. 13202

Tarmac Audio Visual, 71 Market St., Asheville, N.C. 28801

Teaching Materials Corp., Division of Grolier, Inc., 575 Lexington Ave., New York, N.Y. 10022

United School Services, Inc., Box 484, North Miami, Fla. 37161

Webster Division of McGraw-Hill Book Co., Manchester Rd., Manchester, Mo. 63011

Wiley & Son, 605 Third Ave., New York, N.Y. 10016

PART II: CURRICULUM RESOURCE HANDBOOK

Part II of the High School Equivalency Program — a curriculum resource handbook for selecting the course content — is currently in process. This handbook will include sections dealing with all six of the areas of instruction included in the High School Equivalency Program:

- Reading
- Grammar and Usage
- Literature
- Social Studies
- Mathematics
- Science

The design of this forthcoming publication takes the following form:

TOPICAL OUTLINE	CONCEPTS AND UNDERSTANDINGS	SUPPORTING INFORMATION AND INSTRUCTIONAL TECHNIQUES
The outlined topics are designed to provide direction and continuity in planning instruction.	These represent comprehensive generalizations composed of basic concepts illustrating desirable outcomes of each element in the topical outline.	They provide additional information useful to the instructor together with suggested procedures designed to help the students learn effectively.

ERIC Clearinghouse
SEP 23 1969
on Adult Education

This booklet is published primarily for use in the schools of New York State, and free copies are available to New York State school personnel when ordered through a school administrator from the Publications Distribution Unit, State Education Building, Albany, New York 12224.

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